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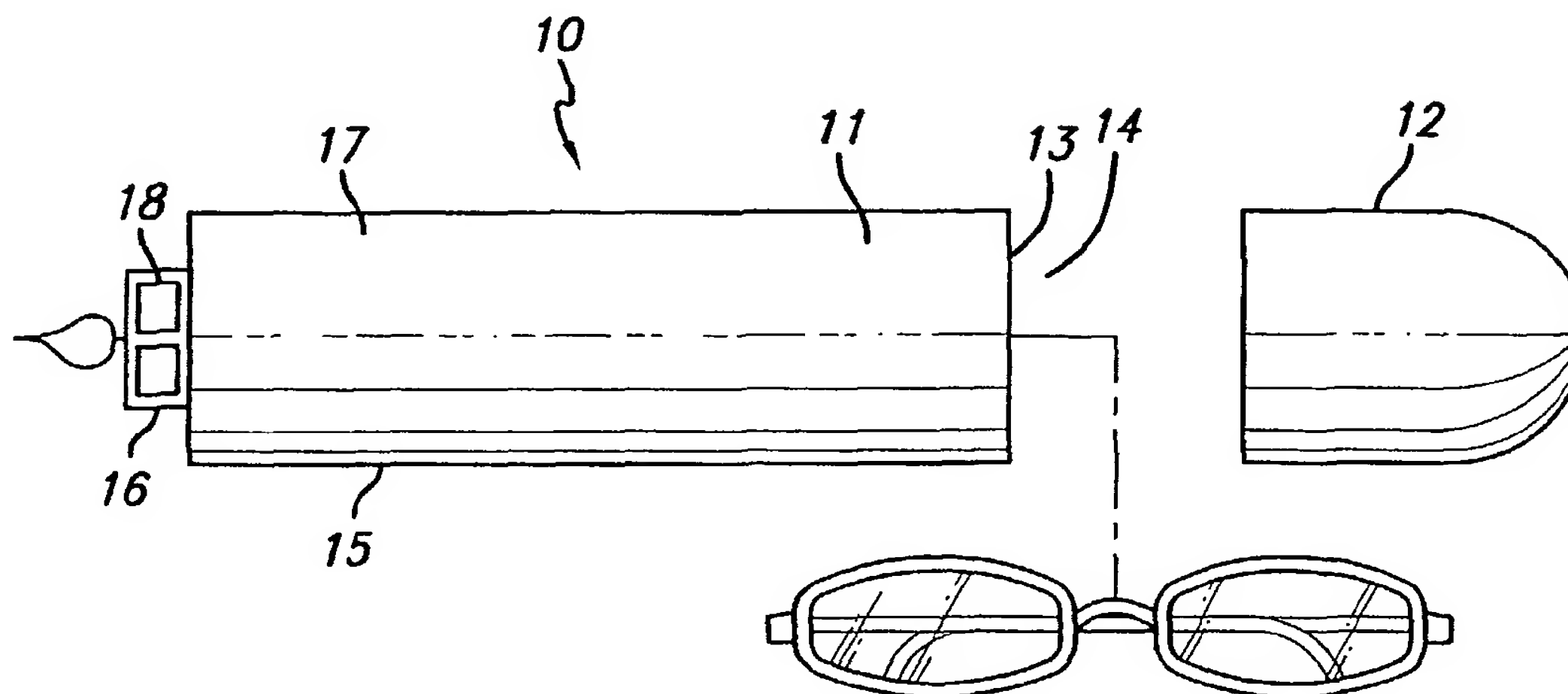
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(54) Title: CONTAINERS WITH ADDITIONAL FUNCTIONALITY



(57) Abstract: Multipurpose containers (10) in which a variety of items can be stored, such as eyeglasses writing instruments, pills, medicines, thermometers, rulers, note pads, digital voice recorders, The containers are provided with lighters (16), video game players (32), and currency converters (30).



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## CONTAINERS WITH ADDITIONAL FUNCTIONALITY

### FIELD OF THE INVENTION

The present invention is directed to multipurpose containers in which a variety of items can be stored, such as eyeglasses writing instruments, pills, medicines, thermometers, rulers, note pads, digital voice recorders, to name a few of the nearly limitless number of items that can be stored. The containers may be provided with an item of additional functionality, such as a massage element, a fan, a calculator, personal digital assistant, a radio, an MP3 player, to name a few possibilities.

### BACKGROUND OF THE INVENTION

There are numerous containers in the prior art that can be used to store items, that may or may not have another purpose associated with it, such as an attached writing instrument, or storing another item, or providing information on a prevailing aspect of the moment, such as temperature or time.

### SUMMARY OF THE INVENTION

The present invention is directed to multipurpose containers and that can be used to store and retain a variety of items, including such items as eyeglasses, medicines, foods, rulers, thermometers, note pads, to name but a few of the possibilities. The containers have an interior space for storing an item. Further, the containers are provided with an item that provides an additional functionality to the container. Those items include massage elements, personal digital assistants ("PDA's"), radios, MP3 players and other digital music systems, calculators, utility storage devices (like Swiss army knives), fans, currency converters, a lighter, video gaming device.

While the detailed description relates to a container for eyeglasses, it is immediately apparent that other items can be stored in the containers as well.

### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a side elevational view of a container provided with a massage element.

Figure 2-6 are side elevational views of additional embodiments of containers provided with a massage elements.

Figure 7 is a side elevational view of a personal digital assistant (PDA) and container of the present invention.

Figure 8 is a side elevational view of an alternative embodiment of a personal digital assistant and container.

Figure 9 is a side elevational view of a radio and container of the present invention.

Figure 10 is a side elevational view of an alternative embodiment of a radio and container of the present invention.

Figure 11 is a side elevational view of a MP3 device and container of the present invention.

5        Figure 12 is a side elevational view of an alternative embodiment of a MP3 device and container of the present invention.

Figure 13 is a side elevational view of a calculator and container of the present invention.

10       Figure 14 is a side elevational view of an alternative embodiment of a calculator and container of the present invention.

Figure 15 is a side elevational view of a utility storage device and container of the present invention.

Figure 16 is a side elevational view of an alternative embodiment of a utility storage device and container of the present invention.

15       Figure 17 is a side elevational view of fan and container of the present invention.

Figure 18 is a side elevational view of an alternative embodiment of a fan and container of the present invention.

Figure 19 is a side elevational view of an alternative embodiment of the present invention.

20       Figure 20 is a side elevational view of a lighter and container of the present invention.

Figure 21 is a side elevational view of an alternative embodiment of a lighter and container.

25       Figure 22 is a side elevational view of an alternative embodiment of a lighter and container.

Figure 23 is a side elevational view of an alternative embodiment of a lighter and container.

Figure 24 is a side elevational view of a currency converter and container of the present invention.

30       Figure 25 is an alternative embodiment of a side elevational view of a currency converter and container of the present invention.

Figure 26 is an alternative embodiment of a side elevational view of a currency converter and container of the present invention.

35       Figure 27 is a side elevational view of a video gaming device and container of the present invention.

Figure 28 is an alternative embodiment of a side elevational view of a video gaming device and container of the present invention.

Figure 29 is a side elevational view of a digital voice recorder and container of the present invention.

5        Figure 30 is a side elevational view of an alternative embodiment of a digital voice recorder and container of the present invention.

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

10        Figure 1 shows a container 10 for storing eyeglasses or other items. The container 10 is provided with a body 11 defining a cavity in which an item such as eyeglasses can be stored. The container is provided with a cap 12 dimensioned to close the opening 13 of the body 11, through which opening 13 the eyeglasses are inserted into the cavity. When the cap 12 is joined to the body 11, the interior space is enclosed. When the cap is removed from the body, the interior space can be accessed, permitting the user to insert or remove the eyeglasses from the space.

15        The container is further provided with a massage element 15 at its other end. The massage element has a spherical tip suited to providing a pleasing or therapeutic effect to parts of a person's body. The massage effect can be provided manually, or it can be provided mechanically. One such manner of providing the effect mechanically can be provided by placing a vibrator within the housing 17, which can hold a battery (not shown) for powering the vibrator.

25        In an alternative embodiment depicted in Figure 2, the container opens between the housing 15 and body 11. Body 11 can be provided with rim 11a that fits within the interior wall of the housing 15 and forms a frictional fit therewith. In yet a further alternative embodiment shown in Figure 3, the housing is provided with a recess or opening 18 on one of its sides for receiving the body 11. This positions the massage element perpendicular to the longitudinal axis of the body 11. Figure 4 shows an embodiment where the opening 13, and cap 12, which seals the opening, is positioned at the end opposite the massage element 15.

30        Figure 5 shows an alternative arrangement in which the massage element 15 is mounted to a clamshell type eyeglass case. The clamshell-type eyeglass case is provided with an upper portion 20, and a lower portion 22 each of which are joined to each other

by a hinge 24. Figure 6 shows a clam-shell type arrangement for the case wherein the massage head is parallel to the longitudinal axis of the body.

Figure 7 shows a container for storing eyeglasses having a PDA device (Personal Digital Assistant) 28 located on the container. In the embodiment shown, the container 10 is provided with a portion 22 that is attached to the body 20 by a hinge 24. The PDA is provided with a keyboard 30, display 32, and functionality keys 34. The portion 22 can be opened and closed in order to provide access to the interior of the container. In another arrangement shown in Figure 8, the container can be provided with an opening in at least one end. A cap or other closure 12 can then be placed over the opening, or removed therefrom, to provide access to the interior of the container.

Figure 9 shows a container on which a radio 40 is positioned on the container 10. The radio is provided with the standard controls: an on-off switch 42, a tuner control 44, a volume control 46, band selection, and a tuner display. Figure 9 shows the container provided with a container body which has an opening at one end through which the glasses can be inserted and removed from the container. The cap 12 can be placed over the container in order to seal the interior of the container from the outside environment, or, as the case may be, removed to provide access to the interior of the container. Figure 10 shows a container in a clam-shell arrangement in which a radio is positioned on the container.

Figure 11 shows a portable MP3 player in which is positioned on the container 10 is in a clam shell type arrangement. The MP3 player is provided with the conventional controls, including ones that permit track selection, fast forward, rewind, skip forward, skip backward, erase, upload, download, on and off, and volume. The device is also provided with ports that can be used to interface the device to a source from which MP3's can be transferred, either to or from the MP3 device. Figure 12 shows the container provided with a container body which has an opening at one end through which the glasses can be inserted and removed from the container. The cap can be placed over the container in order to seal the interior of the container from the outside environment, or, as the case may be, removed to provide access to the interior of the container.

Figure 13 shows a calculator which is positioned on the container that is provided with a clam shell type arrangement. The calculator is provided with the conventional controls, including ones that buttons for digits, mathematical functions, clear, and on/off.



It is also provided with a numeric display 52. Figure 14 shows the container provided with a container body which has an opening at one end through which the glasses can be inserted and removed from the container. The cap 12 can be placed over the container in order to seal the interior of the container from the outside environment, or, as the case may be, removed to provide access to the interior of the container.

Figure 15 shows a utility type device 100 which provides a container having a body 102 for storing eyeglasses in an interior portion, and other compartments 104, 106, 108 110, for holding any of a number of useful items, such as scissors, tweezers, a screw driver, and a pen. The container may also be provided with a flashlight 112 having a light source, an on/off switch 114, and a recess for a power supply, such as a battery. A sidewall portion 116 is joined to the body 102 by a hinge 118. The sidewall can be opened and closes along the hinge. Figure 16 shows an embodiment in which the container is open and closed with a cap as in every other even numbered embodiment.

Figure 17 shows a container 10 for storing eyeglasses or other items. The container 10 is provided with a body 11 defining a cavity in which an item such as eyeglasses can be stored. The container is provided with a cap 12 dimensioned to close the opening 13 of the body 11, through which opening 13 the eyeglasses are inserted into the cavity. When the cap 12 is joined to the body 11, the interior space is enclosed. When the cap is removed from the body, the interior space can be accessed, permitting the user to insert or remove the eyeglasses from the space.

The container is further provided with a fan 150 at its other end. The fan 150 has a propeller 152 joined to the body 11 by axial pin 156. The body 11 contains a power source (not shown), such as a battery (not shown), that powers a motor that rotates the axial pin 156. Switch 158 turns the motor on and off.

In an alternative embodiment depicted in Figure 18, the container opens between the housing 154 and body 11. Body 11 can be provided with rim 11a that fits within the interior wall of the housing 154 and forms a frictional fit therewith. Figure 19 shows an alternative arrangement in which the fan 150 is mounted to a clamshell type eyeglass case. The clamshell-type eyeglass case is provided with an upper portion 20, and a lower portion 22 each of which are joined to each other by a hinge 24.

Figure 20 shows a container 10 for storing eyeglasses or other items. The container 10 is

provided with a body 11 defining a cavity that serves as storage space where an item such as eyeglasses can be stored. The container is provided with a cap 12 dimensioned to close the opening 13 of the body 11 positioned at end 14, through which opening 13 the eyeglasses are inserted into the cavity. When the cap 12 is joined to the body 11, the interior space is enclosed. When the cap 12 is removed from the body, the interior space can be accessed, permitting the user to insert or remove the eyeglasses from the space.

The container is further provided with a lighter 16 at its other end 17. The lighter 16 is provided with a housing 18, and a flint 19, such as a flint mounted on a wheel 18a, and a surface positioned to engage the wheel in frictional contact when the wheel is rotated. When the flinted portion of the wheel and the surface contact each other and the wheel is moved, sparks are formed. When wheel 18a is rotated while the button 20 is depressed, a flow of butane or other combustible fluid is released, thereby producing a flame. The flame has a burns for a length of the time that the button is depressed. The fluid can be stored in a cavity (not shown) that is positioned under the housing 18.

In an alternative embodiment depicted in Figure 21, the container opens between the end portion 15 and body 11. Body 11 can be provided with rim 11a that fits within the interior wall of the end portion 15 and forms a frictional fit therewith.

Figure 22 shows an alternative arrangement in which the lighter 16 is mounted to a clamshell type eyeglass case. The clamshell-type eyeglass case is provided with an upper portion 20, and a lower portion 22 each of which are joined to each other by a hinge 24.

Figure 23 shows an alternative embodiment in which the first end 14 is closed and the opening is provided at the other end 17 where lighter 16 is positioned. Thus the glasses are removed or inserted through the same end 16 where the lighter is located.

Figure 24 shows a container for a pair of eyeglasses that is provided with a currency converter. The container is provided with a body 11 defining a cavity having first and second ends 14 and 17, one of which is closed and the other of which is open. As shown in the Figure, first end 14 is closed and second end 17 is open, though it should be understood that the opening could be placed at the first end 14. The second end 17 can be closed with a cap 12, which when removed from the container provides access to the cavity where glasses or other items can be stored.

The container 11 is provided with a keypad 30 for entering the information necessary to carry out a currency conversion operation. The container is further provided with a display 32, such as a liquid crystal display, in order to display information. The converter is provided with a CPU, memory and storage and a power supply (such as a battery) in order to carry out the currency conversions. In addition to being provided

with keys necessary to enter numbers and decimal points, the keypad may optionally be provided with buttons to scroll up and down information displayed on the screen ( such as for example, units of currency). Optionally, the converter and be provided with keys to enter particular units of currency. The converter may also be provided with an enter  
5 button, to signify that all data, or data pertaining to a particular step, has been entered. Also, the converter may be provided with a data port 34, such as a USB port so that current exchange rates can be downloaded to the storage device on the converter.

Figures 25 and 26 show alternative embodiments of the currency converter in which the container is provided with a door or flap 20 that is mounted to the body 11 by a  
10 hinge 24. When the door is open the glasses or other items can be inserted through the opening into the cavity, and the door can then be shut. Figure 26 shows a currency converter located on a container in a clam shell type arrangement that is similar to the one shown in Figure 22.

Figure 27 shows a container for storing eyeglasses having a video game device  
15 28 located on the container. The device is provided with a display 32 and keypad 30 with the individual keys necessary to operate the device, such as a set of keys arrayed around the perimeter of a larger key pad. The device is provided with a CPU, memory, storage and a power supply (such as a battery) in order to carry out the function associated with the game. These keypads can be used to control the movement of a game  
20 piece that appears on the screen. In Figure 27, the container 10 is provided with a body 11 defining a cavity in which an item such as eyeglasses can be stored. The container is provided with a cap 12 dimensioned to close the opening 13 of the body 11 positioned at end 14, through which opening 13 the eyeglasses are inserted into the cavity. When the cap 12 is joined to the body 11, the interior space is enclosed. When the cap 12 is  
25 removed from the body, the interior space can be accessed, permitting the user to insert or remove the eyeglasses from the space.

Figure 28 shows an alternative to the Figure 27 embodiment wherein a video game device located on a container in clamshell type container as previously described is provided.

Figure 29 shows a digital voice recorder in which is positioned on the container  
30 10 is in a clam shell type arrangement. The digital voice recorder player is provided with the conventional controls and features, such as a microphone 200, a play/stop switch 202 a record switch 204, a volume control 206, a speaker, and jacks for external microphones and speakers 210. Figure 30 shows the container provided with a container body which  
35 has an opening at one end through which a the glasses can be inserted and removed from the container. The cap can be placed over the container in order to seal the interior of the



container from the outside environment, or, as the case may be, removed to provide access to the interior of the container.

I claim:

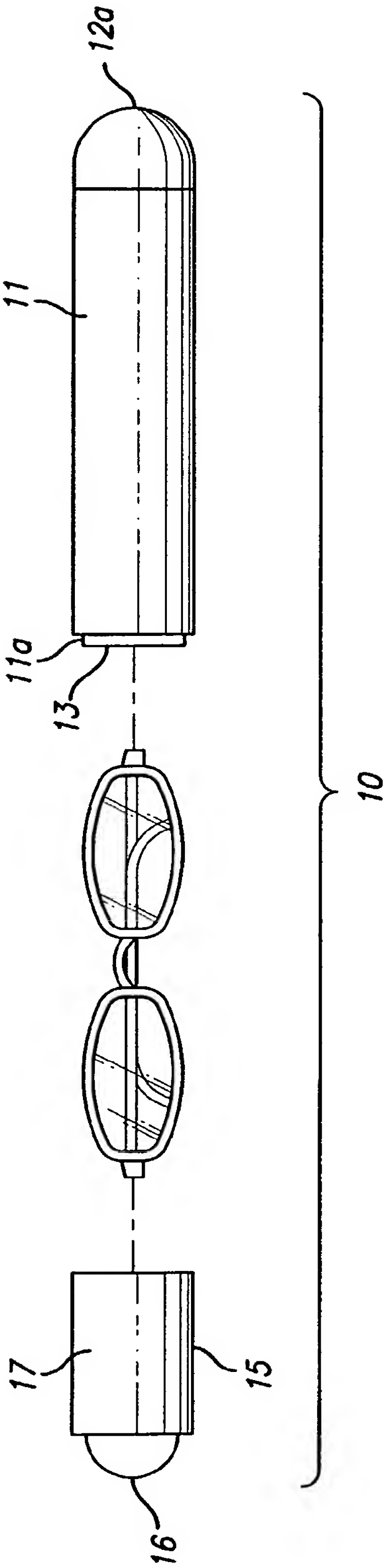
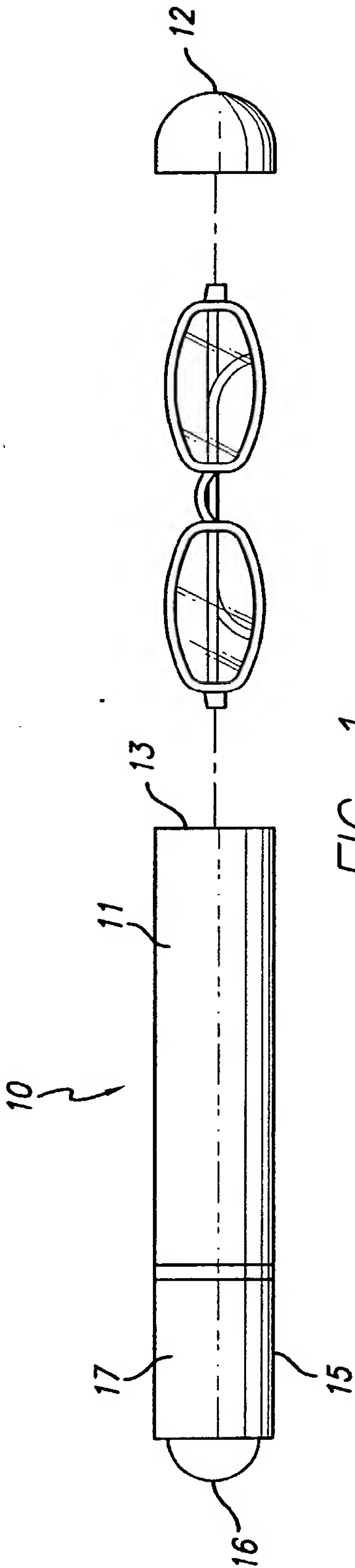
1. A container for storing items comprised of a body defining an interior space for storing items, an opening through which the items can be stored in the body and removed therefrom, a closure that having a first open position permitting access to the first interior space and a second closed position closing the second interior space, and a lighter positioned on the container.  
5
- 10 2. The container of claim 1 wherein the lighter is located at a first container end and the opening is located at a second container end.
3. The container of claim 2 wherein the opening is closed with a closure element that closes the opening of the container.  
15
4. The container of claim 1 wherein the lighter is located at a first container end and is removable from the body in order to provide access to the opening of the container.
- 20 5. The container element of claim 1 wherein the stored item is a pair of eyeglasses.
6. A container for storing items comprised of a body comprised of a first portion and a second portion, wherein the first portion and the second portion are joined together at a hinge, the first portion and second portion defining an interior space for storing items, that, when in the open state, permits access to the interior of the body, and when closed, closes the interior space, and a lighter located on the container.  
25
7. The container of claim 6 wherein the stored item is a pair of eyeglasses.  
30
8. A container for storing items comprised of a body defining an interior space for storing items, an opening through which the items can be stored in the body and removed therefrom, a closure that having a first open position permitting access to the first interior space and a second closed position closing the second interior space, and a currency converter located on the container.  
35

9. The container of claim 8 wherein the opening is closed with a closure element that closes the opening of the container.
10. The container of claim 8 wherein the stored item is a pair of eyeglasses.
- 5 11. A container for storing items comprised of a body comprised of a first portion and a second portion, wherein the first portion and the second portion are joined together at a hinge, the first portion and second portion defining an interior space for storing items, that, when in the open state, permits access to the interior of the body, and when closed, closes the interior space, and a currency converter located on the container.
- 10 12. The container of claim 11 wherein the stored item is a pair of eyeglasses.
- 15 13. A container for storing items comprised of a body defining an interior space for storing items, an opening through which the items can be stored in the body and removed therefrom, a closure that having a first open position permitting access to the first interior space and a second closed position closing the second interior space, and a video gaming device located on the container.
- 20 14. The container of claim 13 wherein the opening is closed with a closure element that closes the opening of the container.
15. The container of claim 13 wherein the stored item is a pair of eyeglasses.
- 25 16. A container for storing items comprised of a body comprised of a first portion and a second portion, wherein the first portion and the second portion are joined together at a hinge, the first portion and second portion defining an interior space for storing items, that, when in the open state, permits access to the interior of the body, and when closed, closes the interior space, and a video gaming device located on the container.
- 30 17. The container of claim 16 wherein the stored item is a pair of eyeglasses.
- 35 18. A container for storing items comprised of a body defining an interior space for storing items, an opening through which the items can be stored in the body and

removed therefrom, a closure that having a first open position permitting access to the first interior space and a second closed position closing the second interior space, and a digital voice recorder located on the container.

- 5     19.     The container of claim 18 wherein the stored item is a pair of eyeglasses.
20.     The container of claim 18 wherein the opening is closed with a closure element that closes the opening of the container.
- 10    21.     A container for storing items comprised of a body comprised of a first portion and a second portion, wherein the first portion and the second portion are joined together at a hinge, the first portion and second portion defining an interior space for storing items, that, when in the open state, permits access to the interior of the body, and when closed, closes the interior space, and a digital voice recorder
- 15           located on the container.
22.     The container of claim 21 wherein the stored item is a pair of eyeglasses.





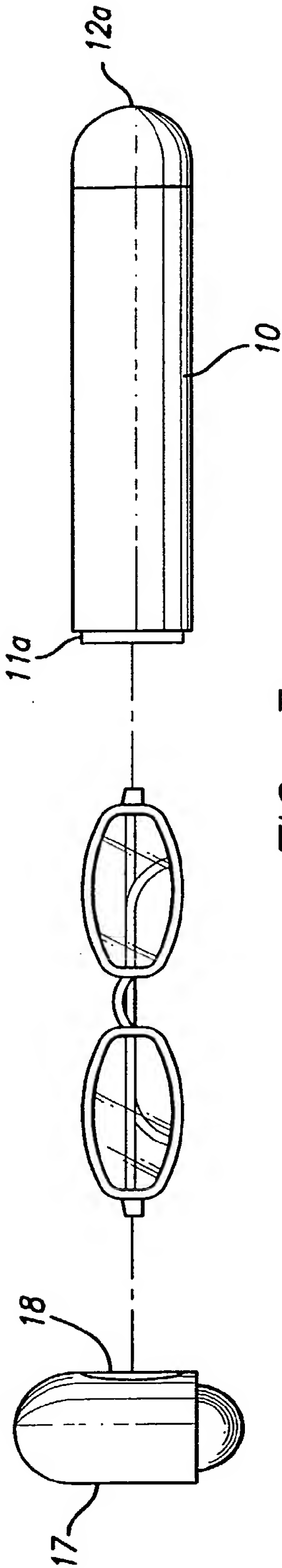


FIG. 3

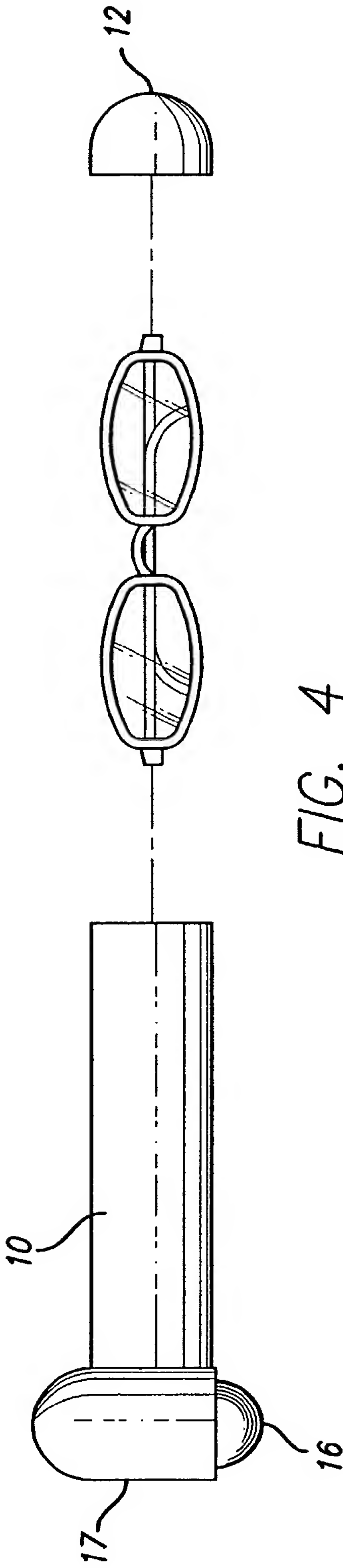
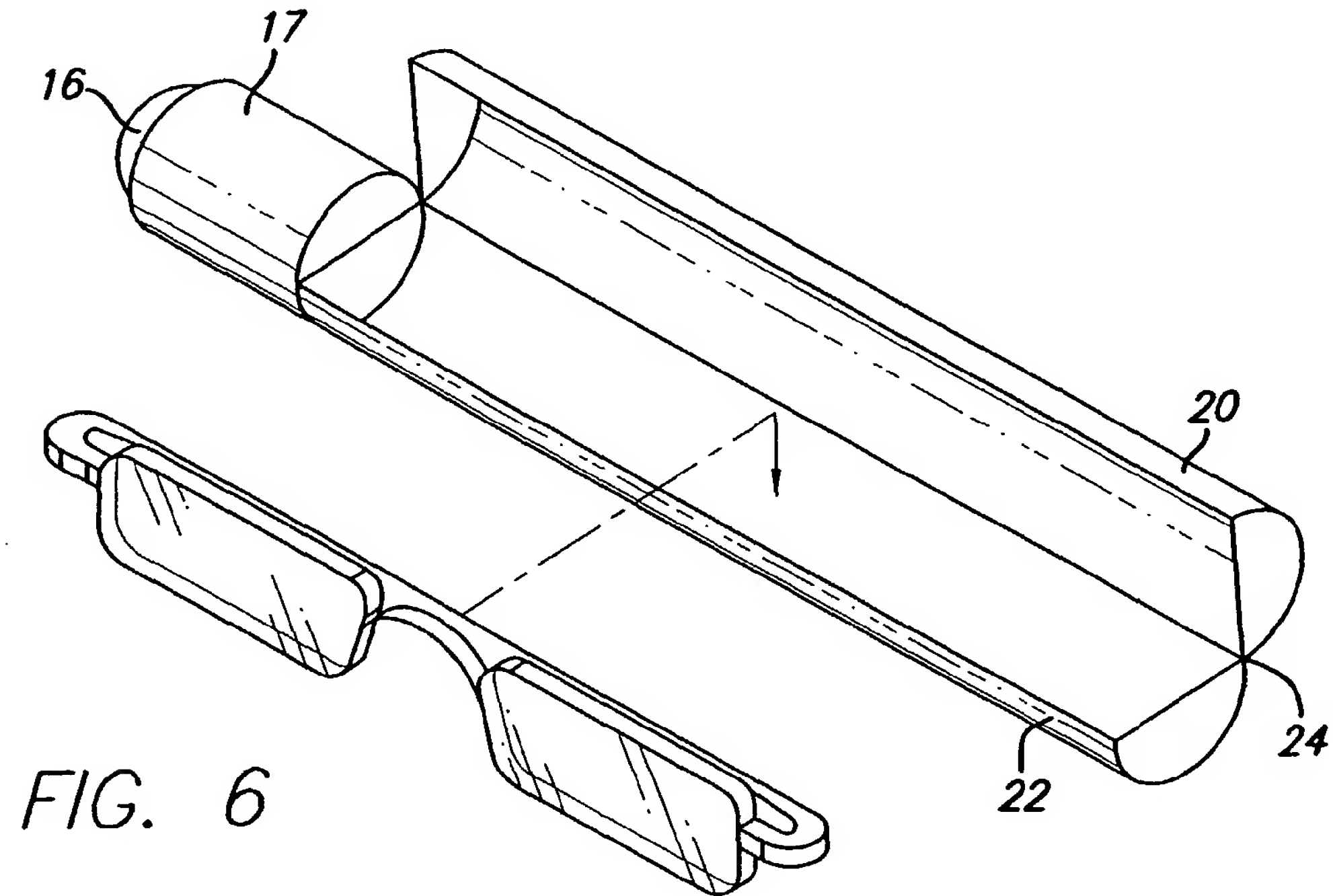
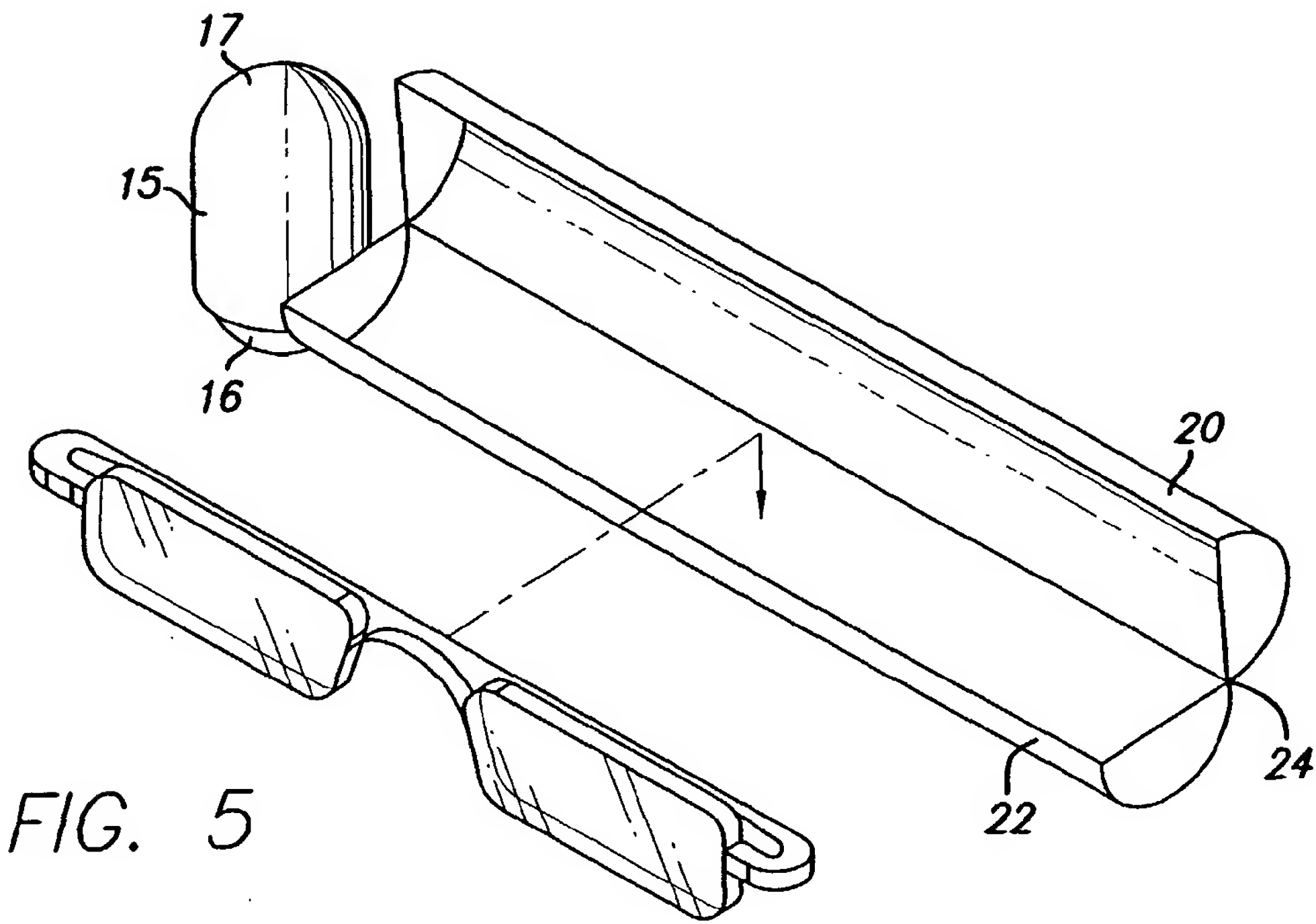
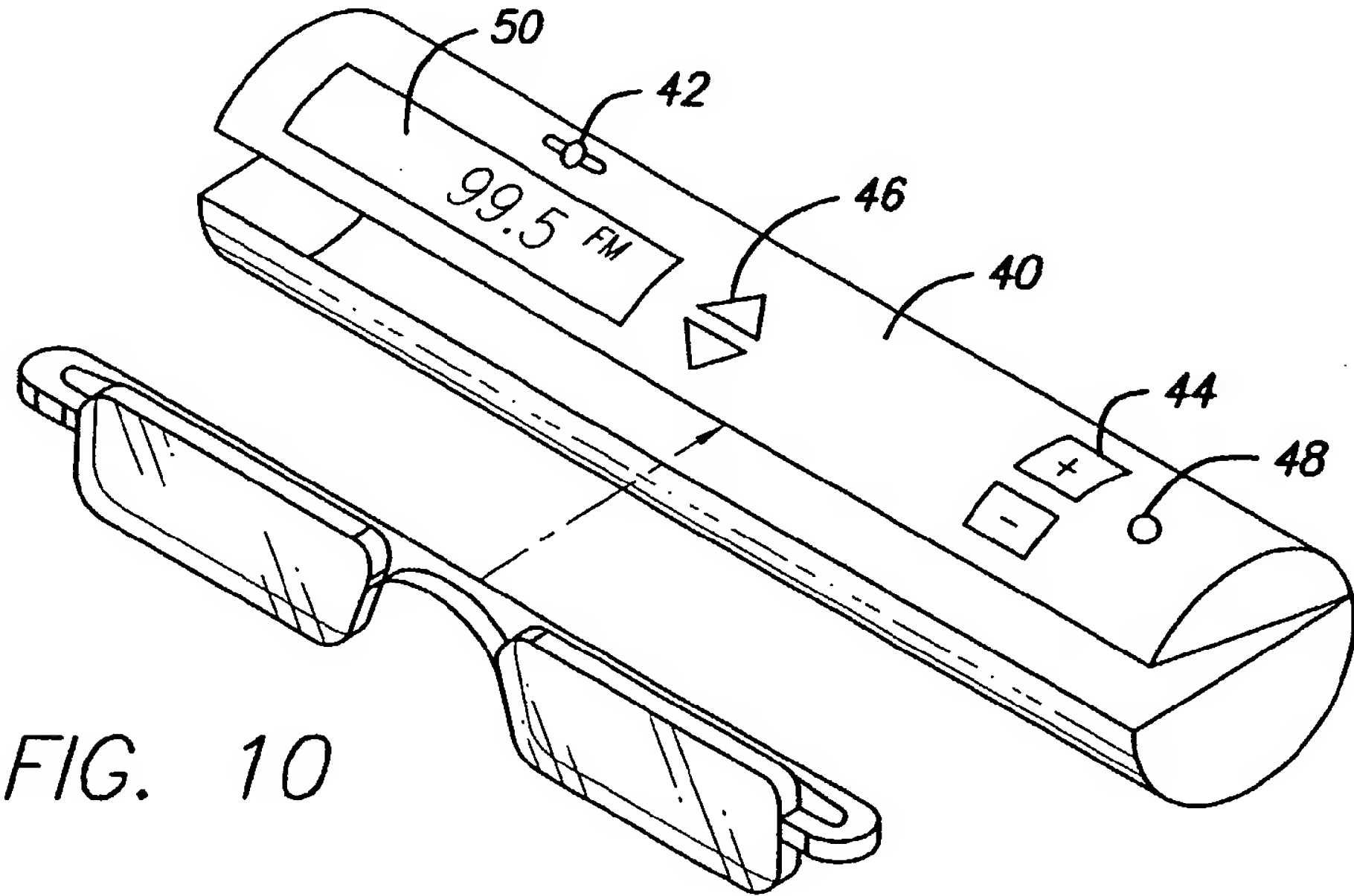
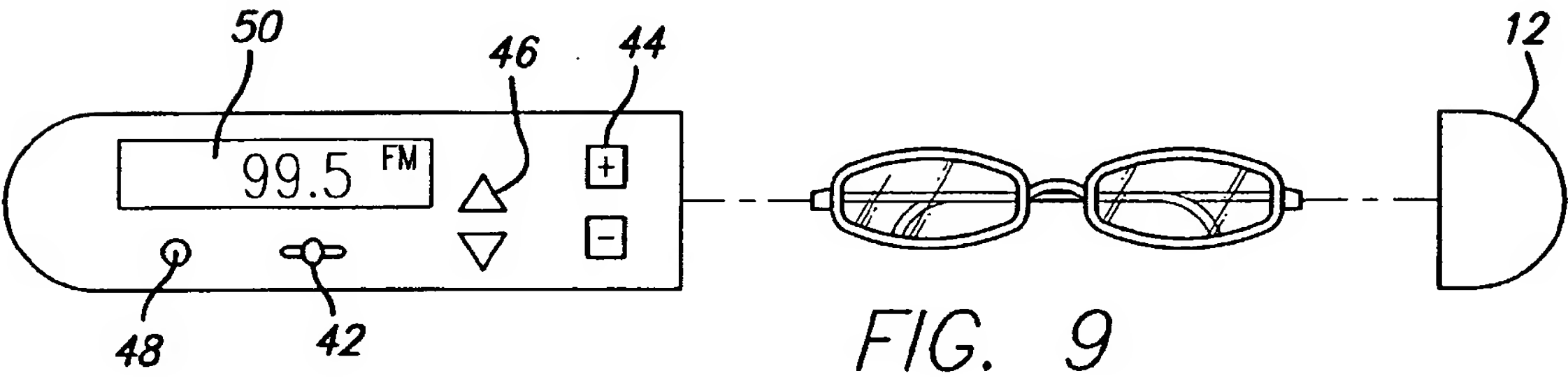
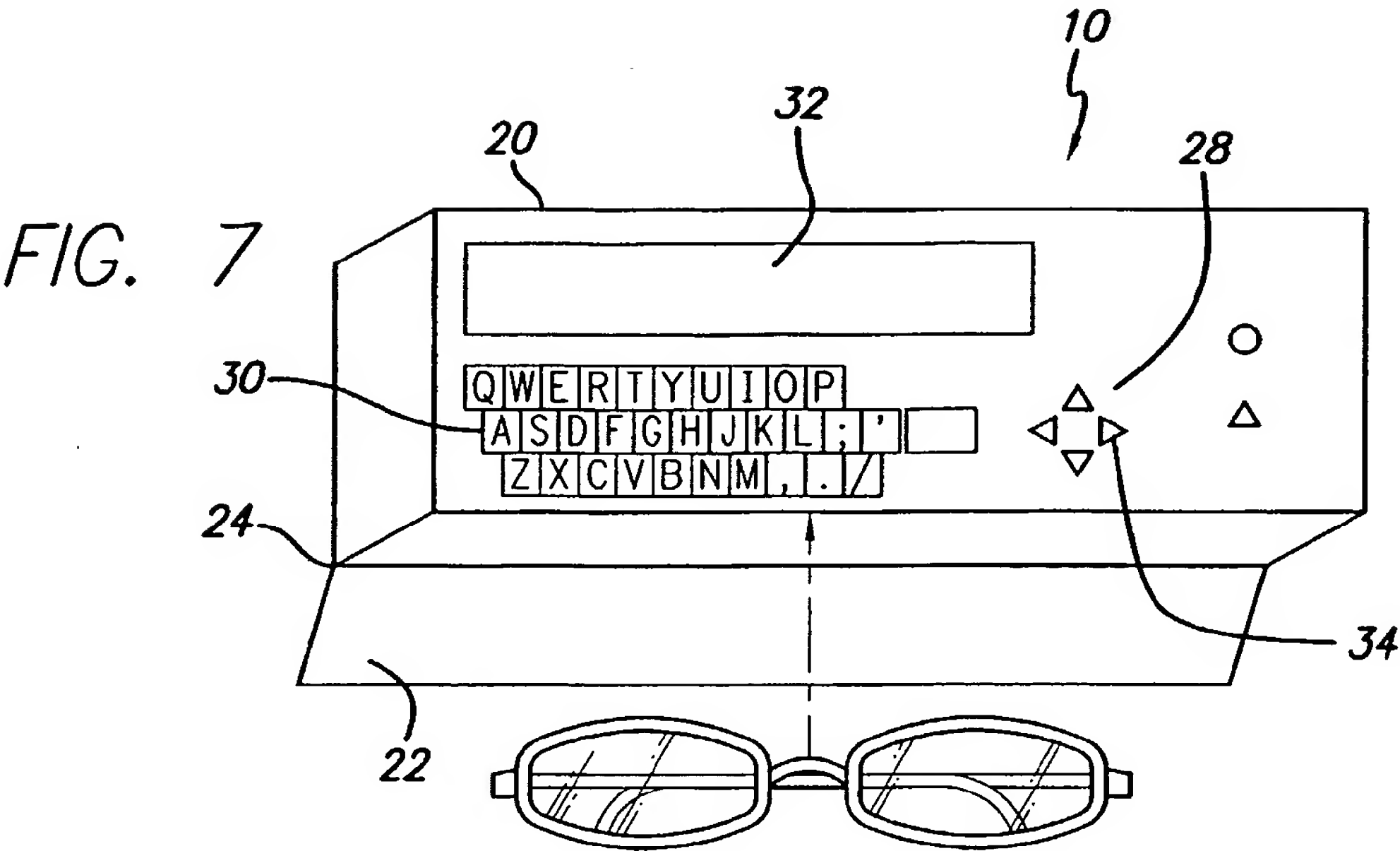
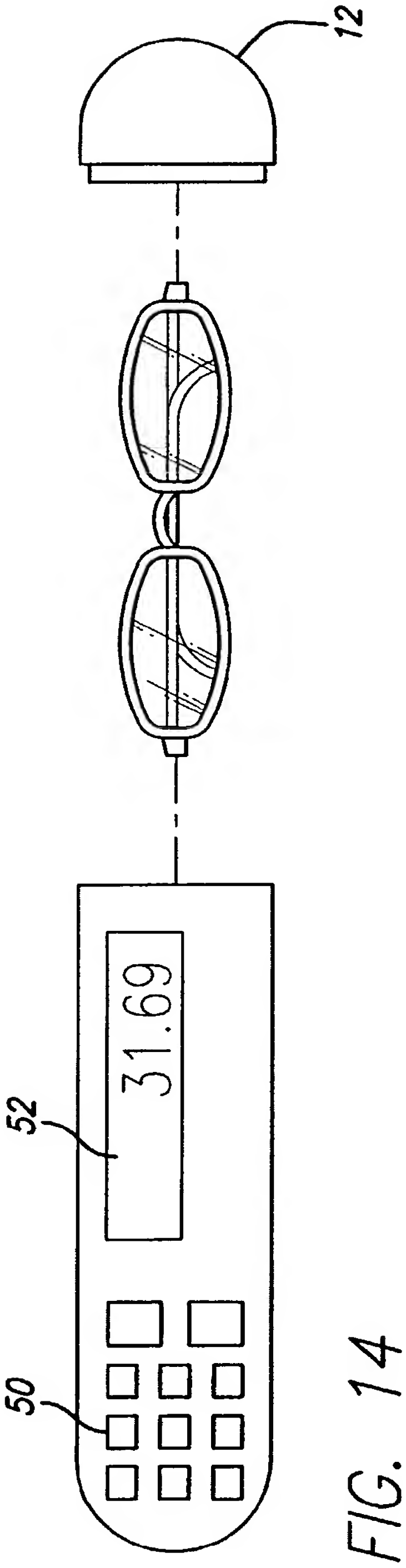
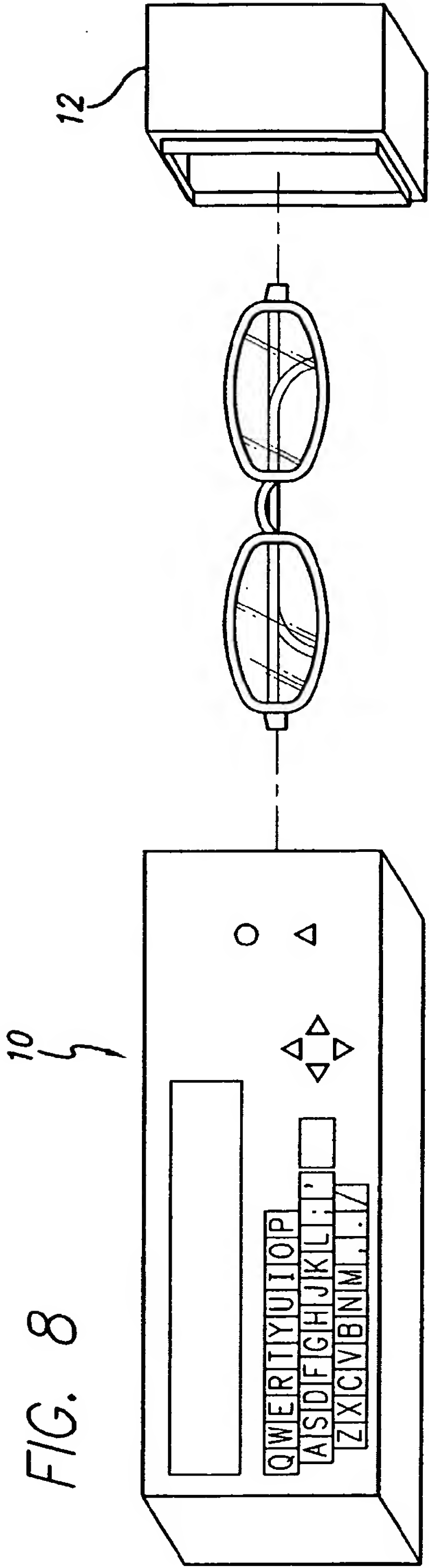


FIG. 4









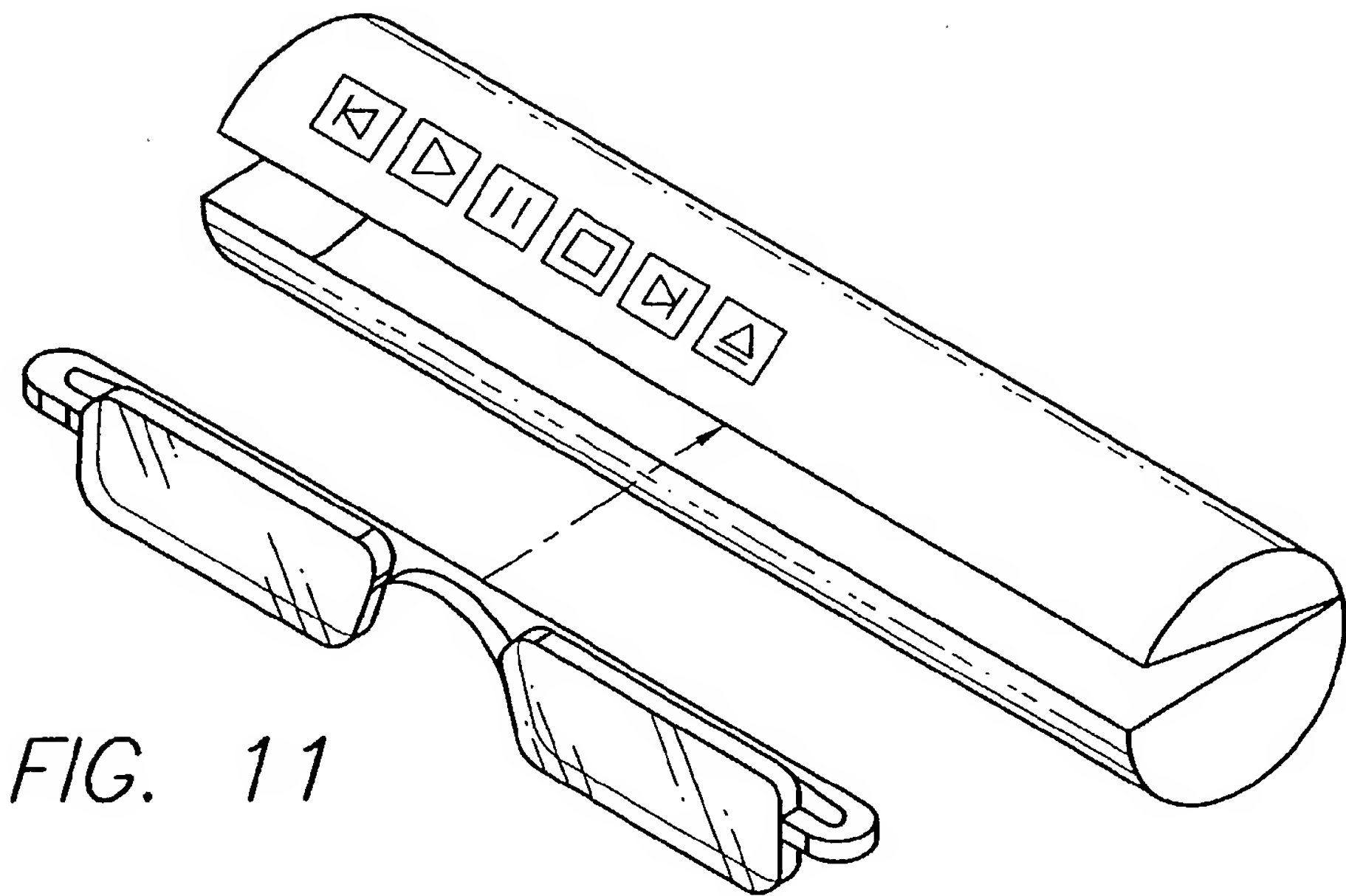


FIG. 11

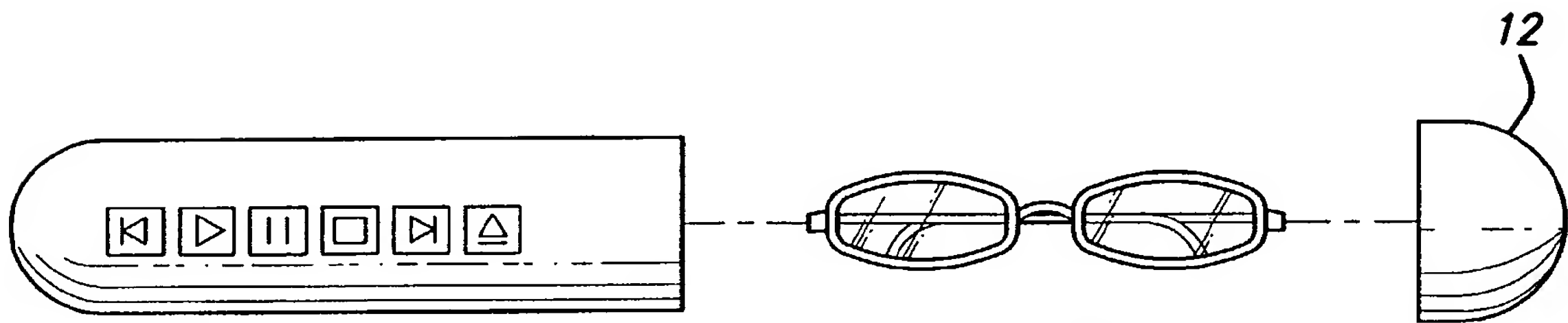


FIG. 12

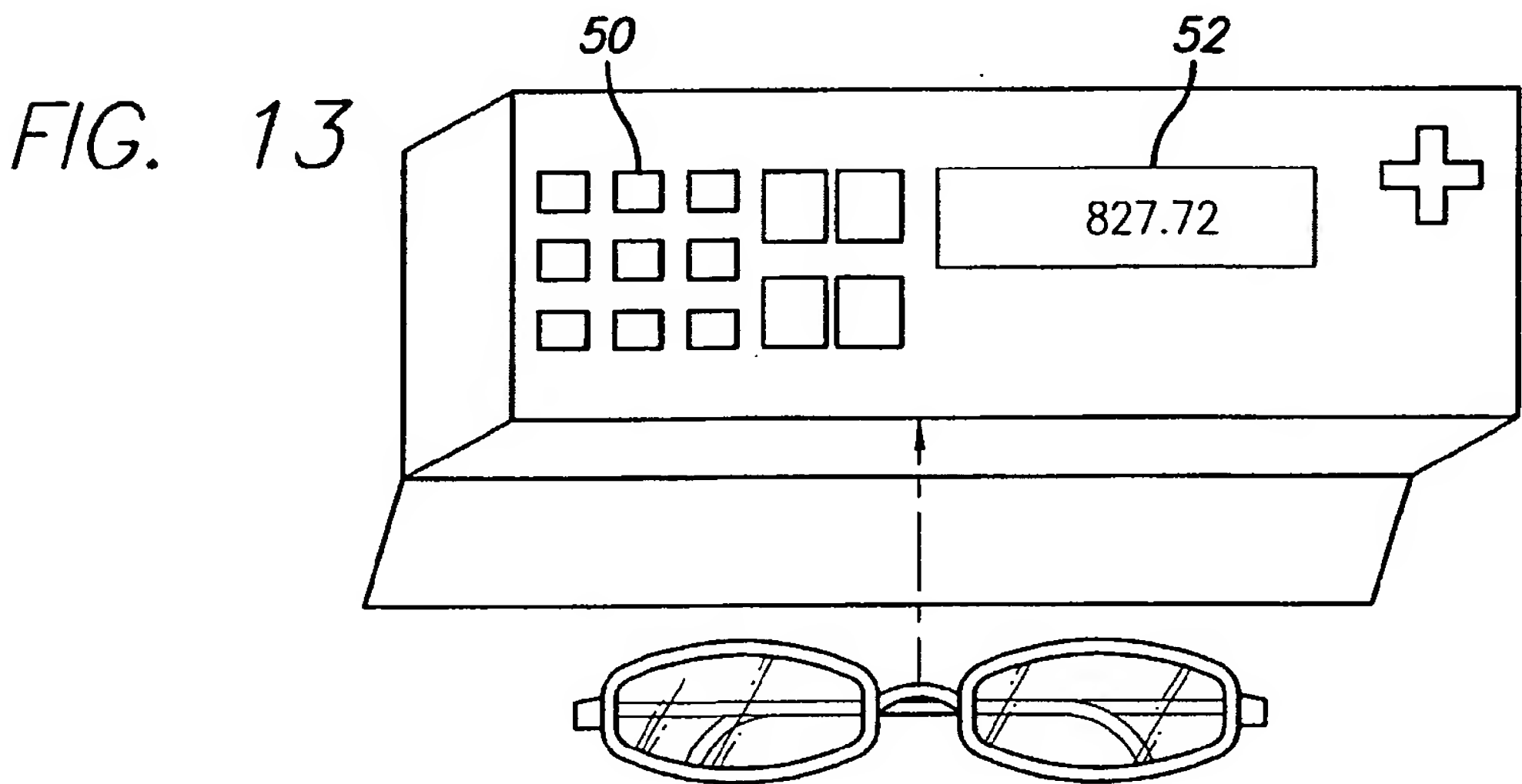


FIG. 13

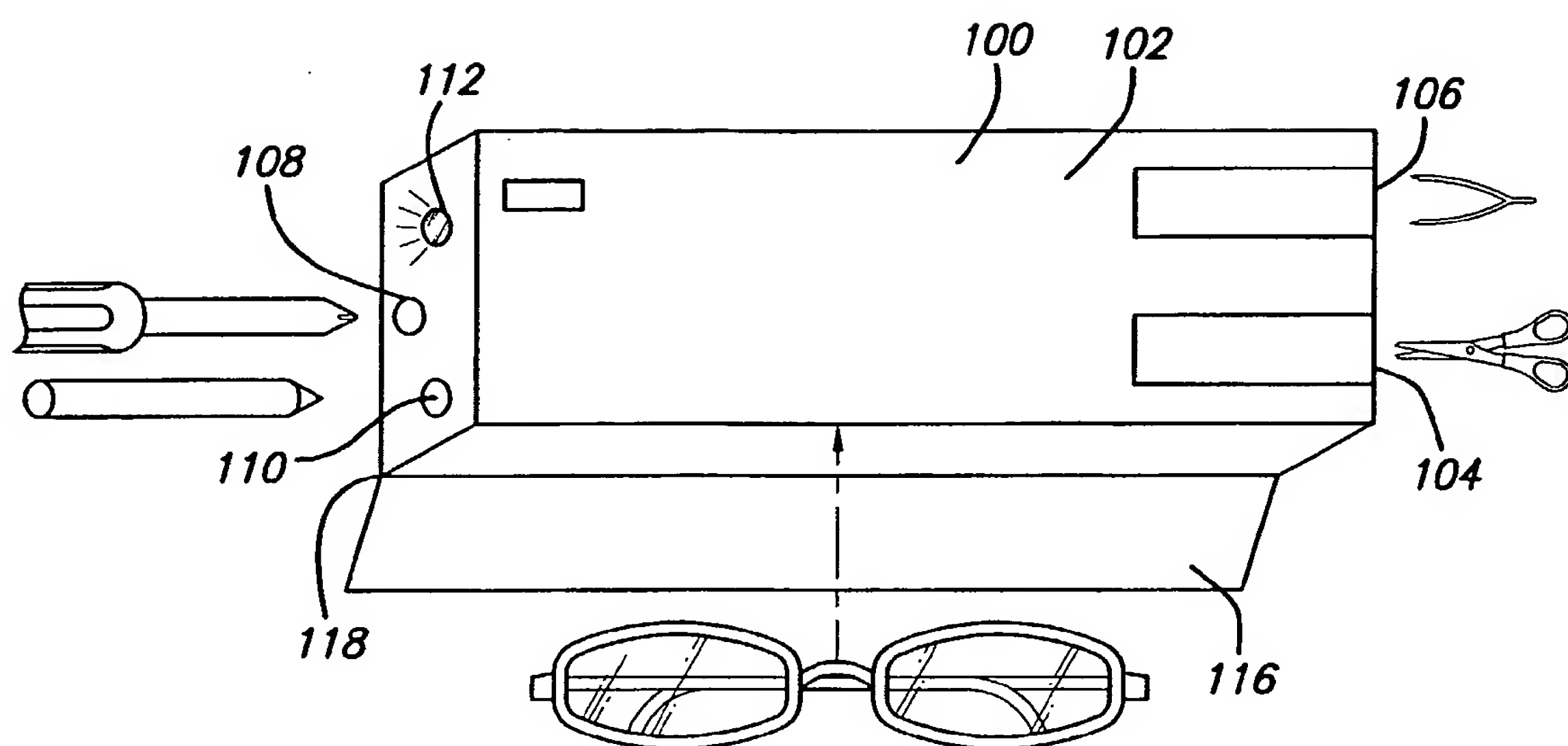


FIG. 15

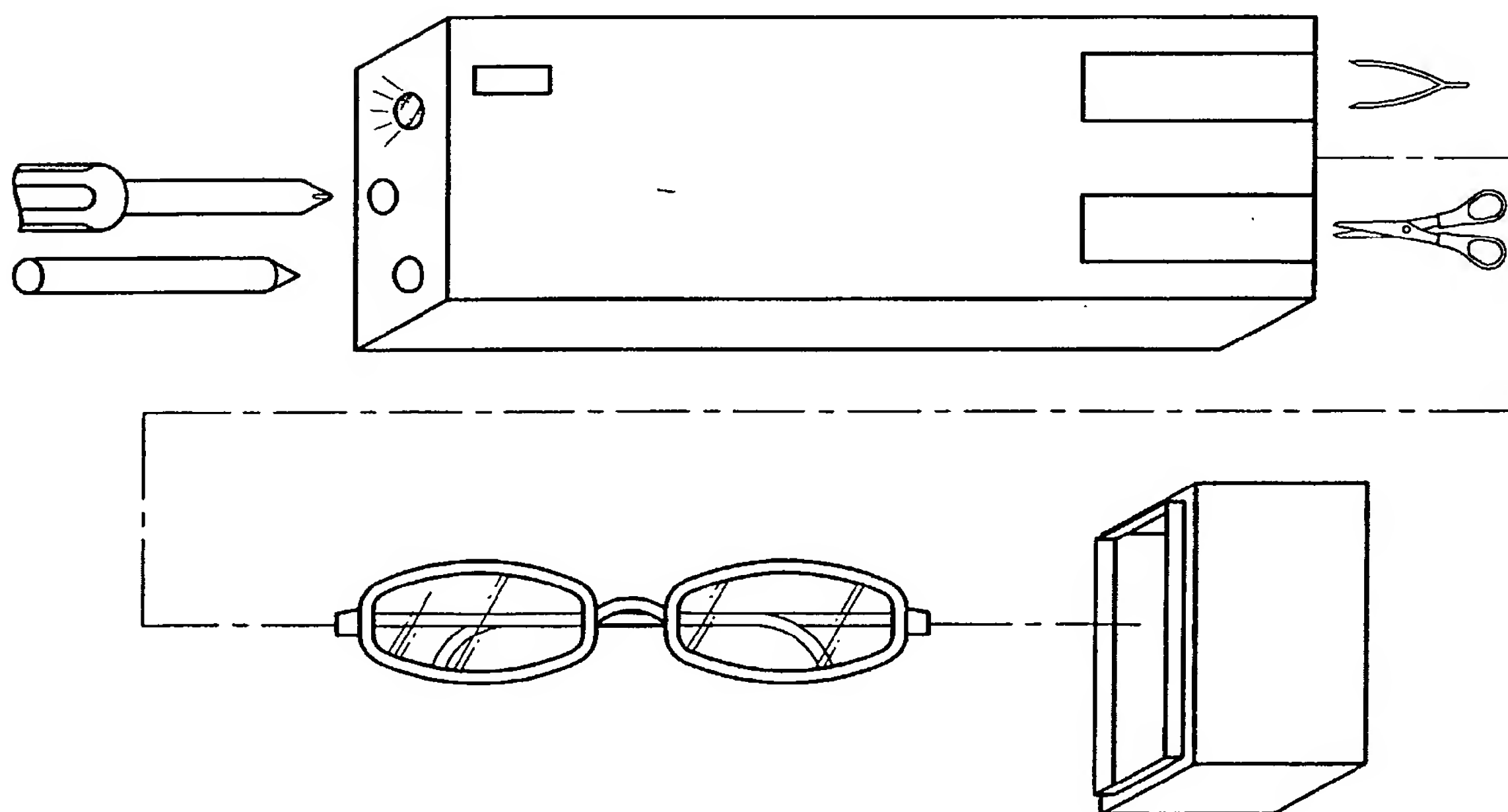
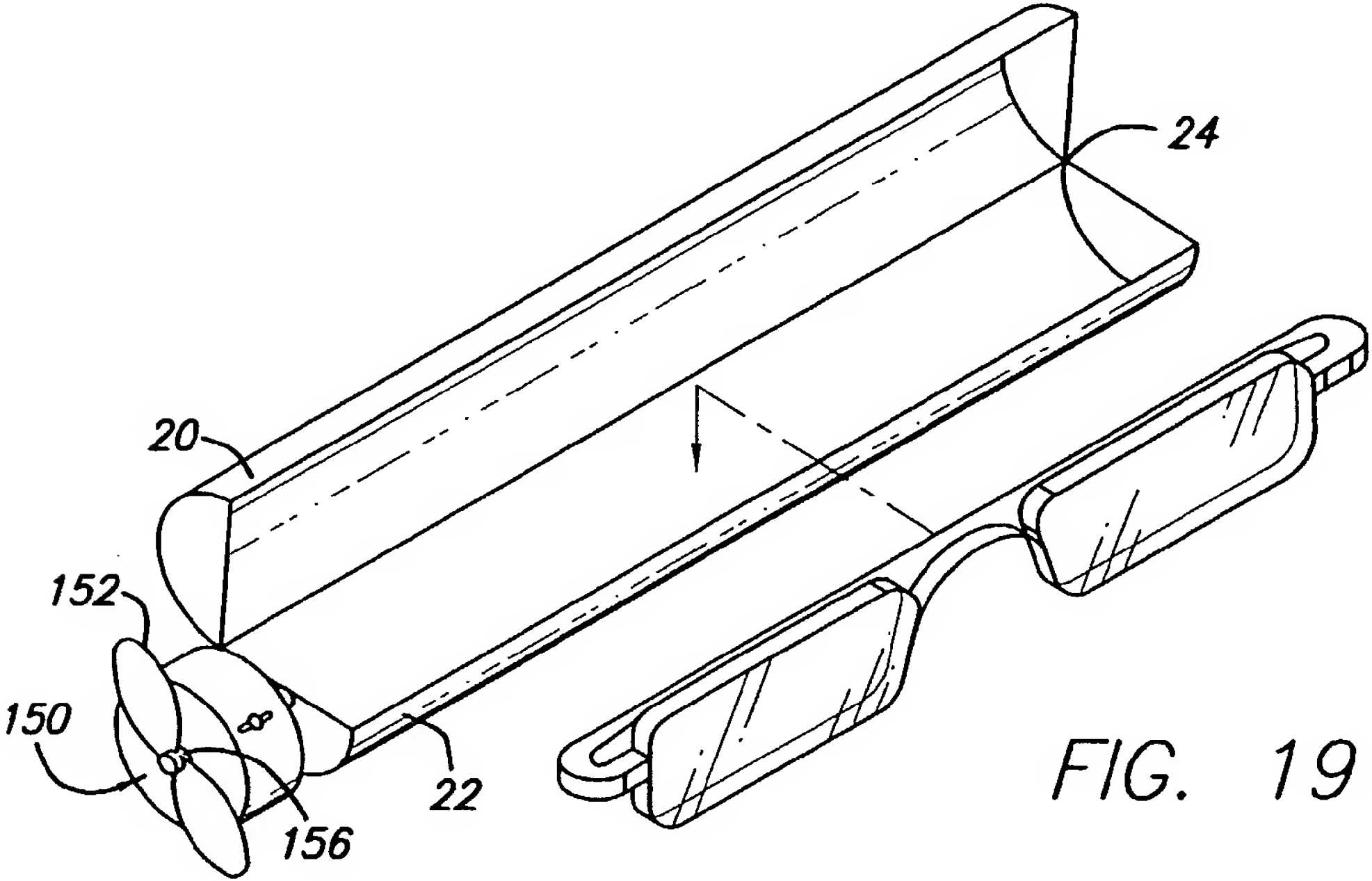
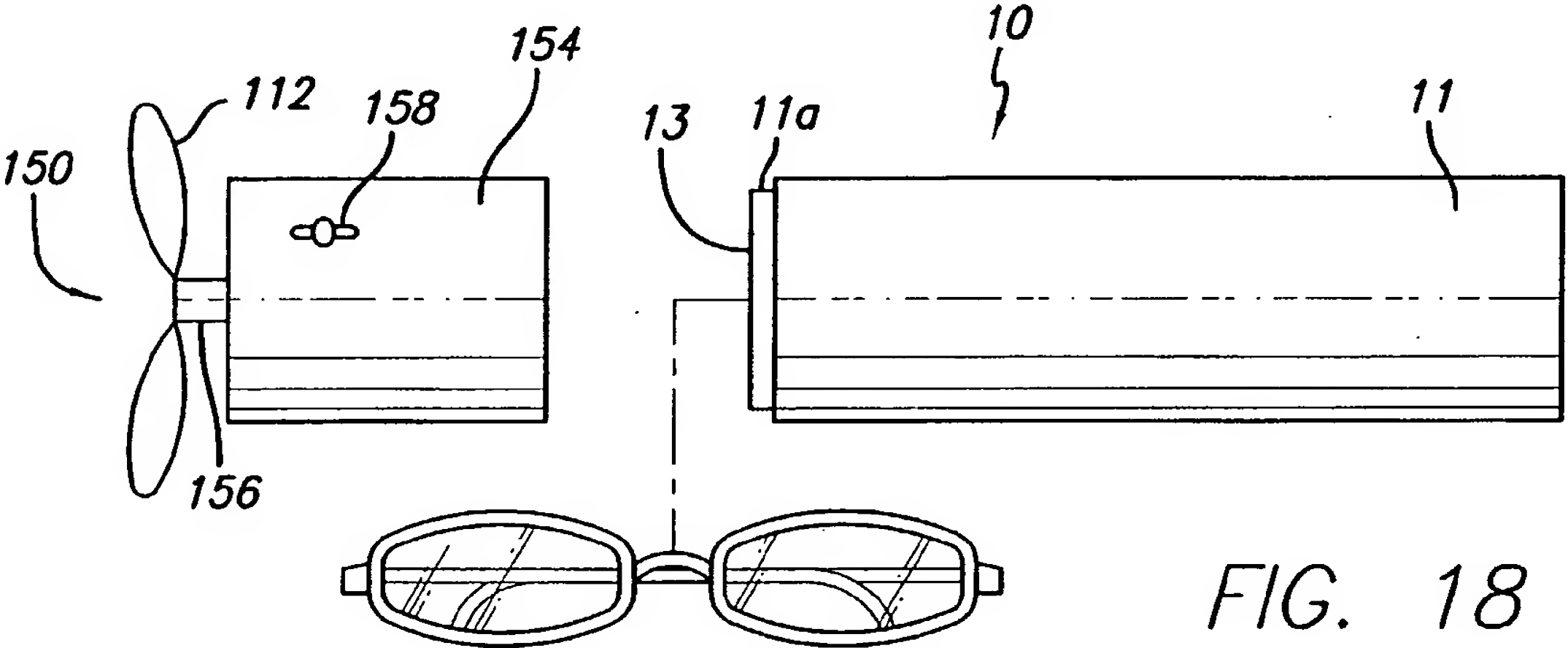
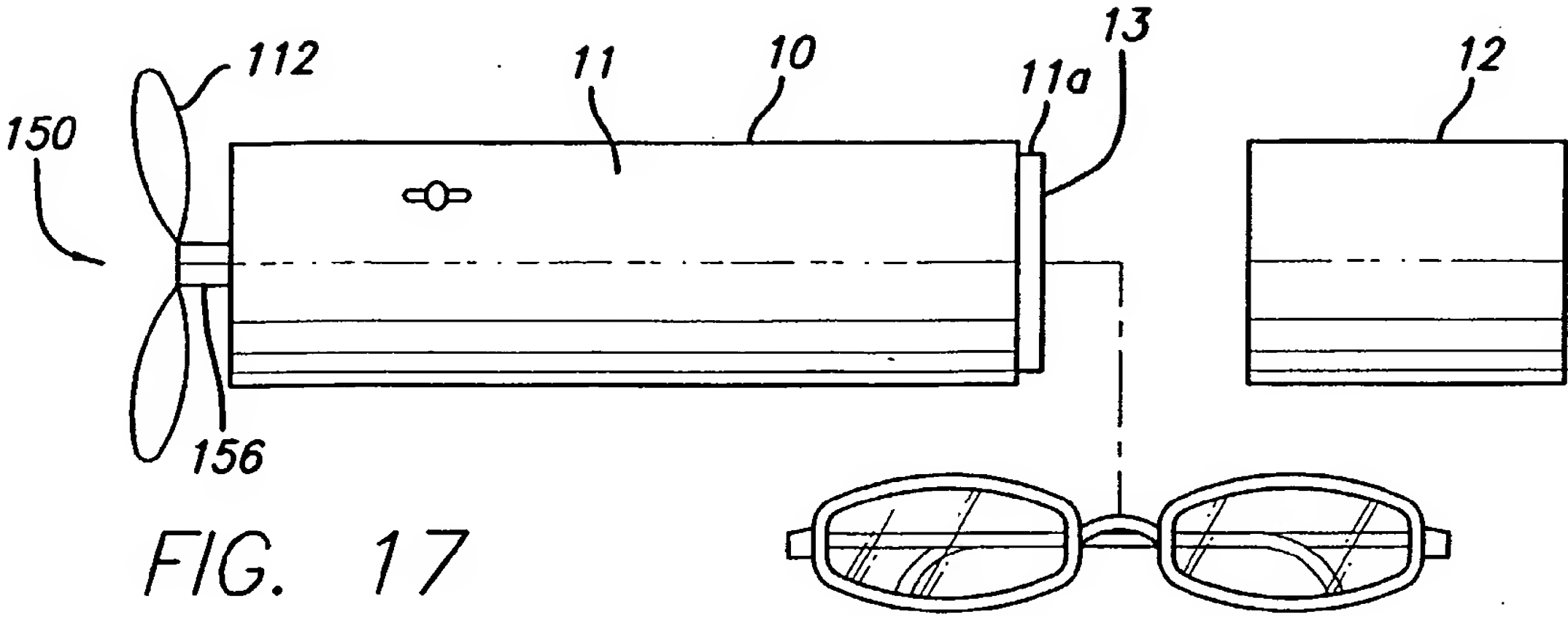
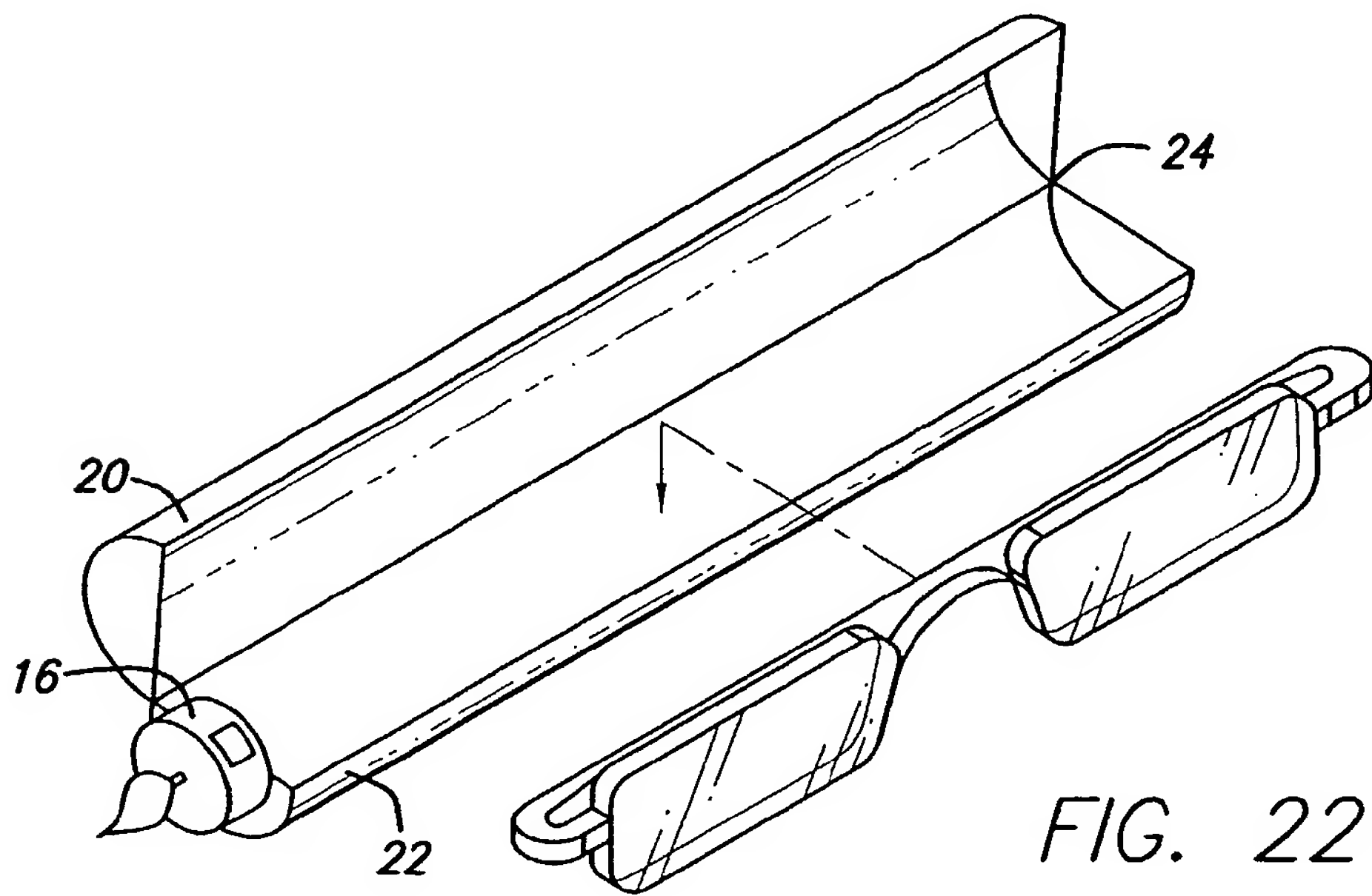
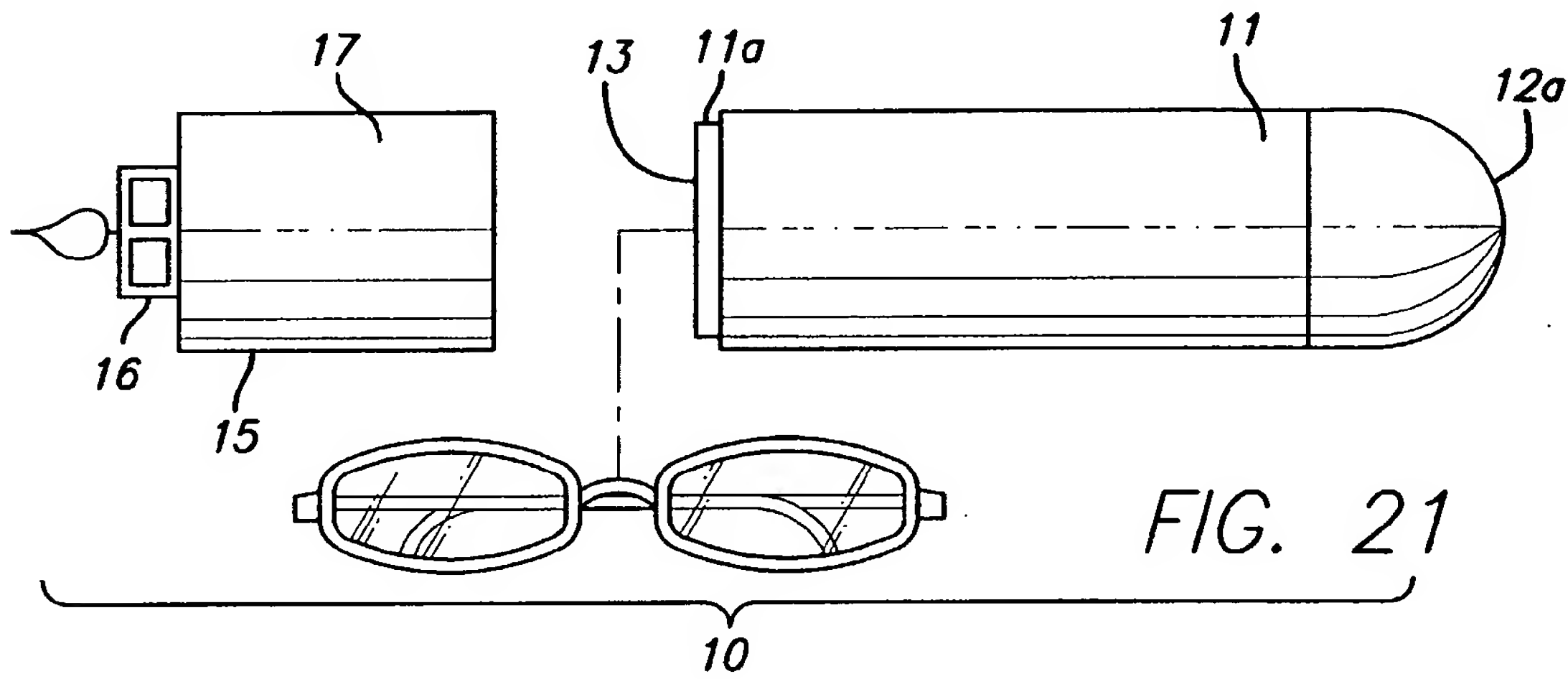
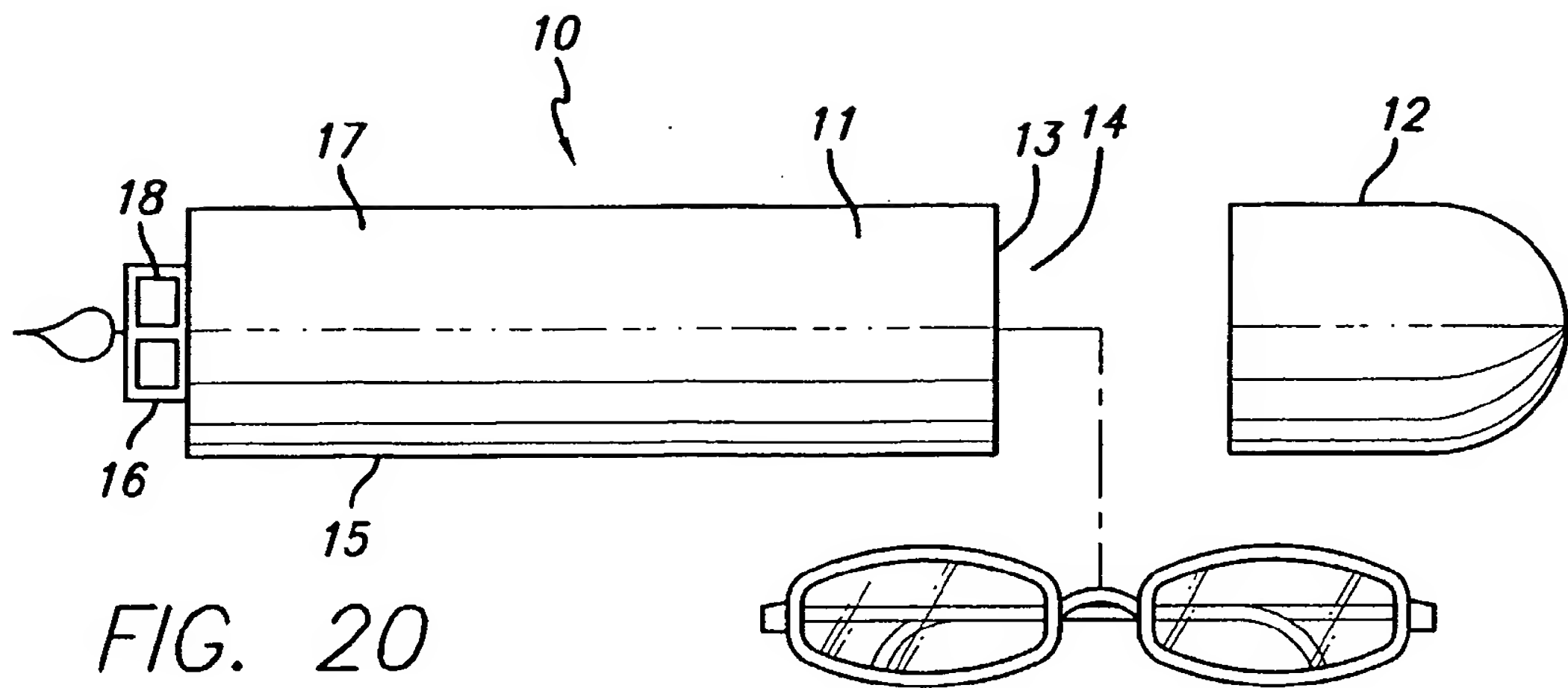


FIG. 16







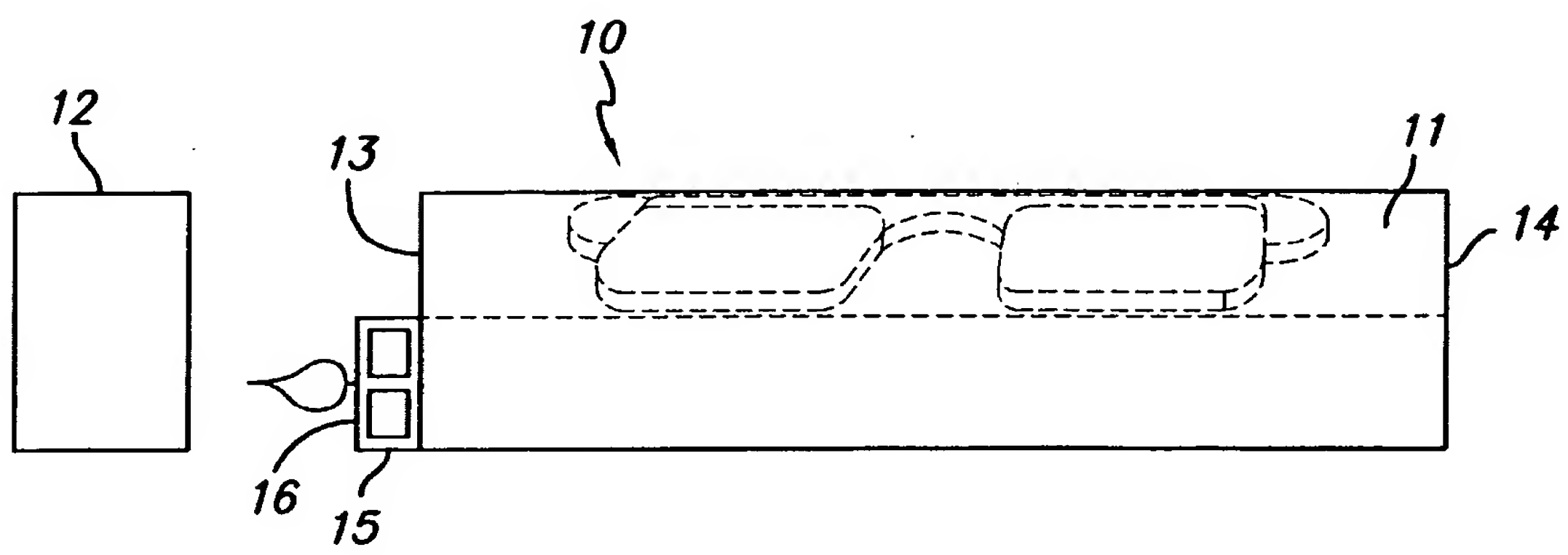


FIG. 23

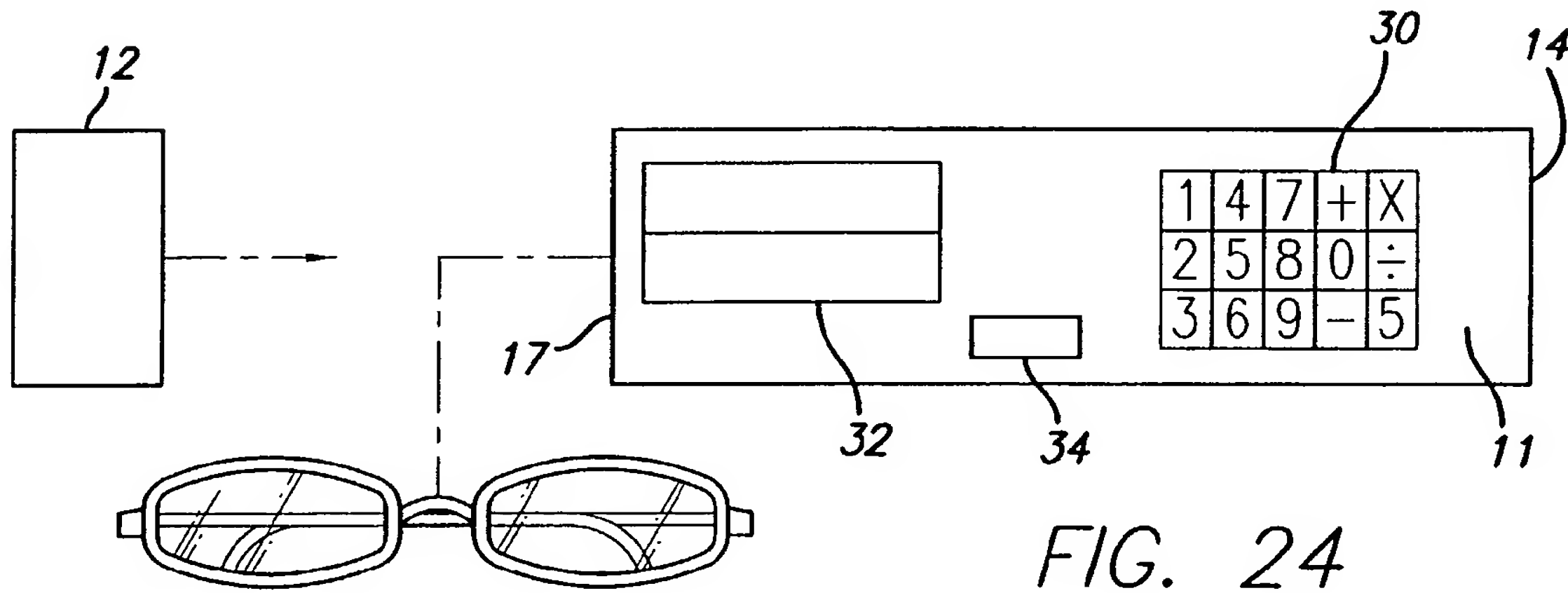
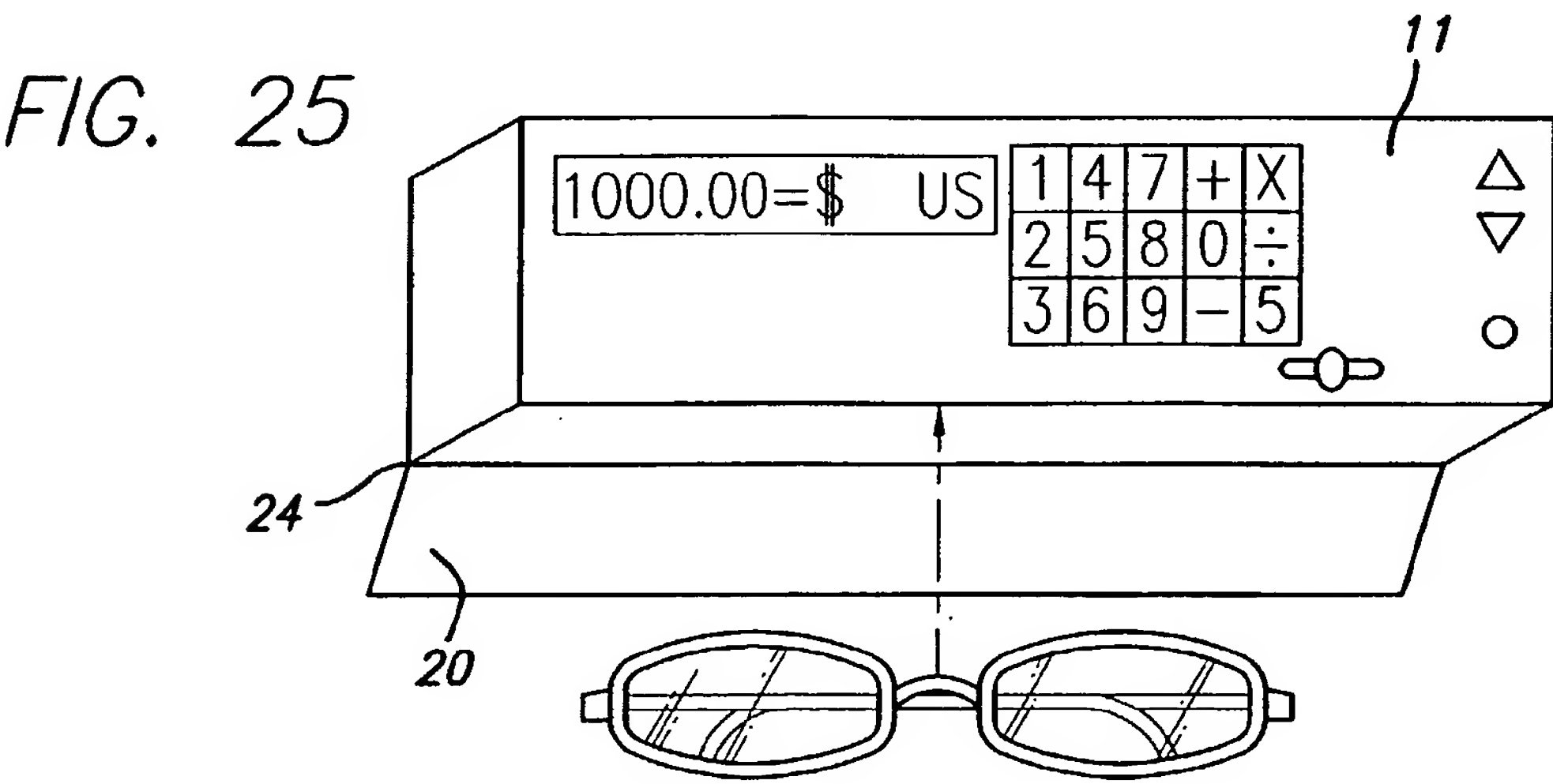


FIG. 24



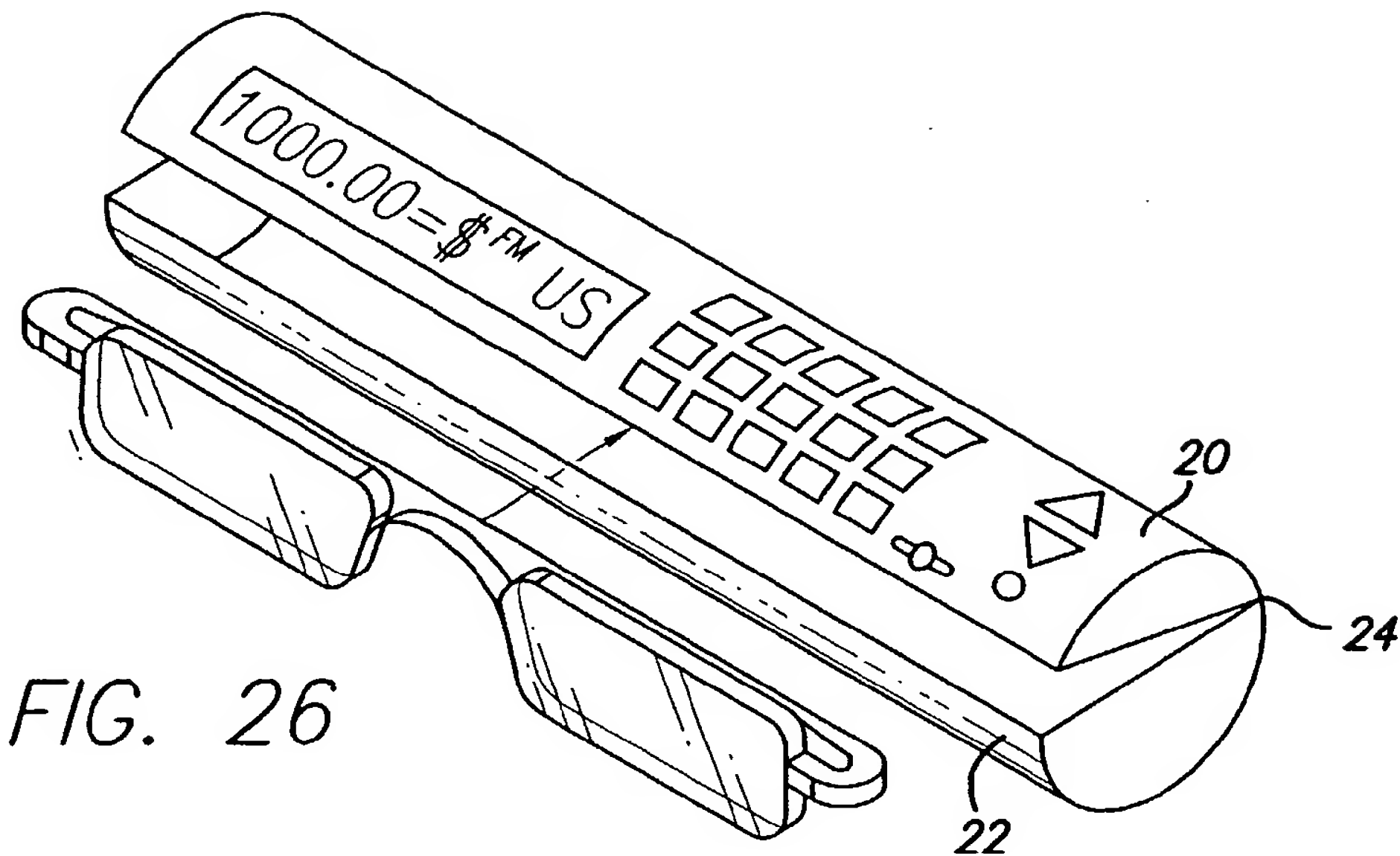


FIG. 26

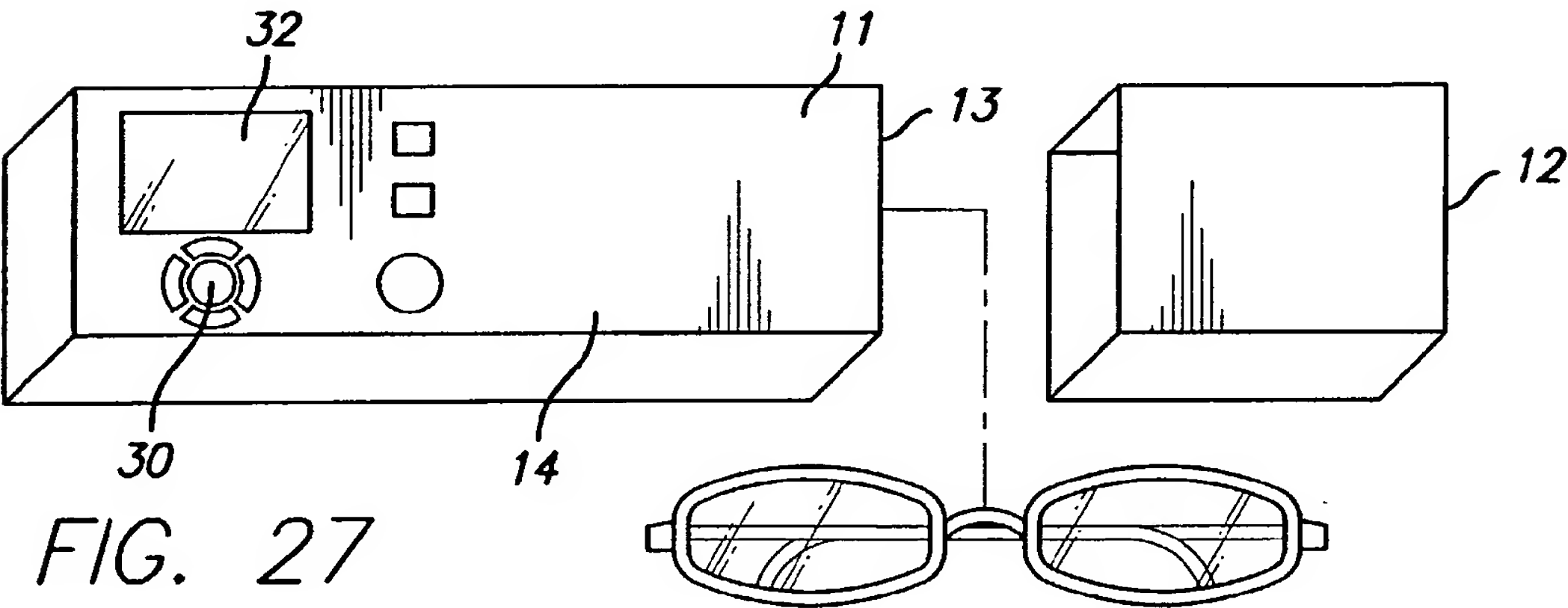


FIG. 27

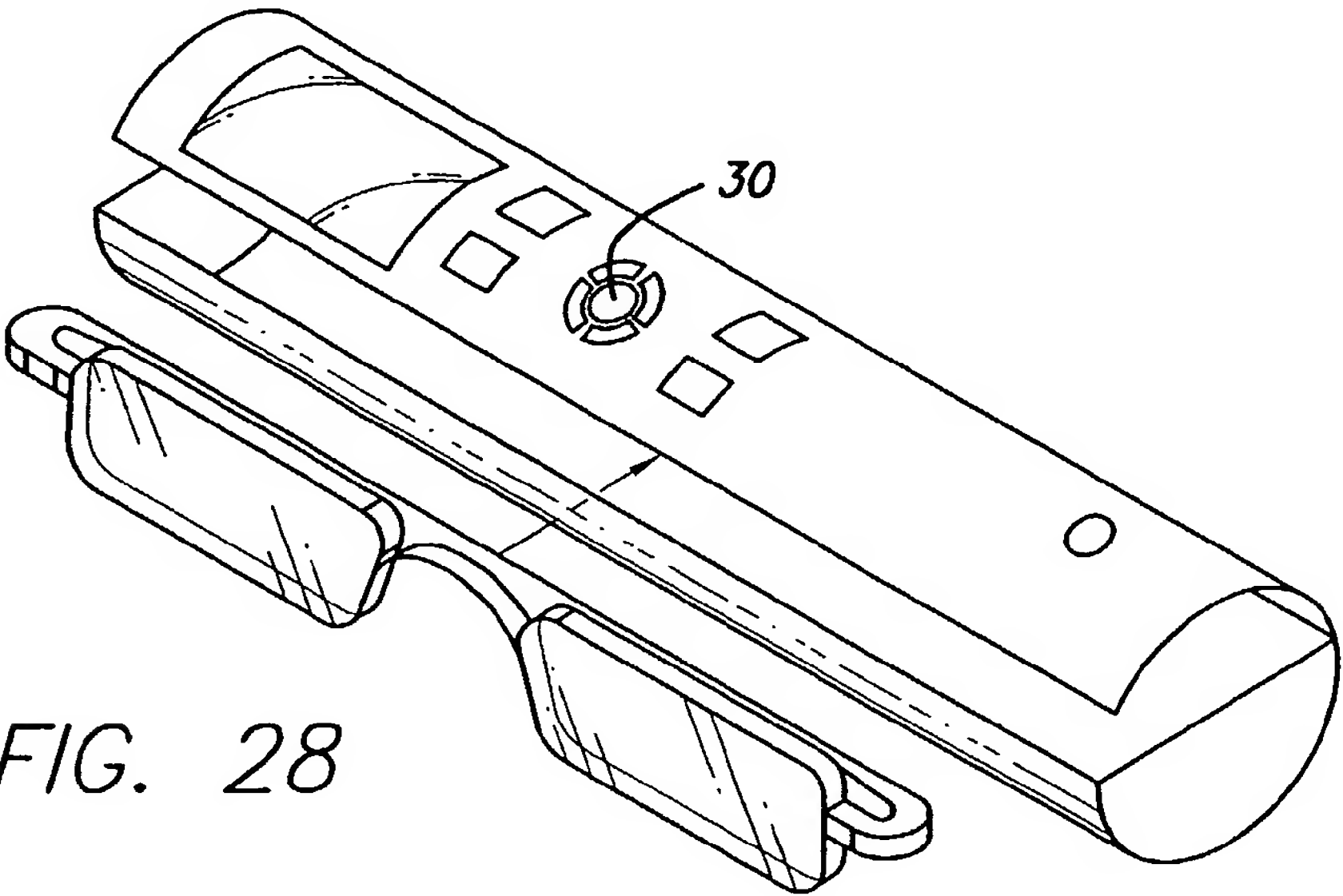


FIG. 28

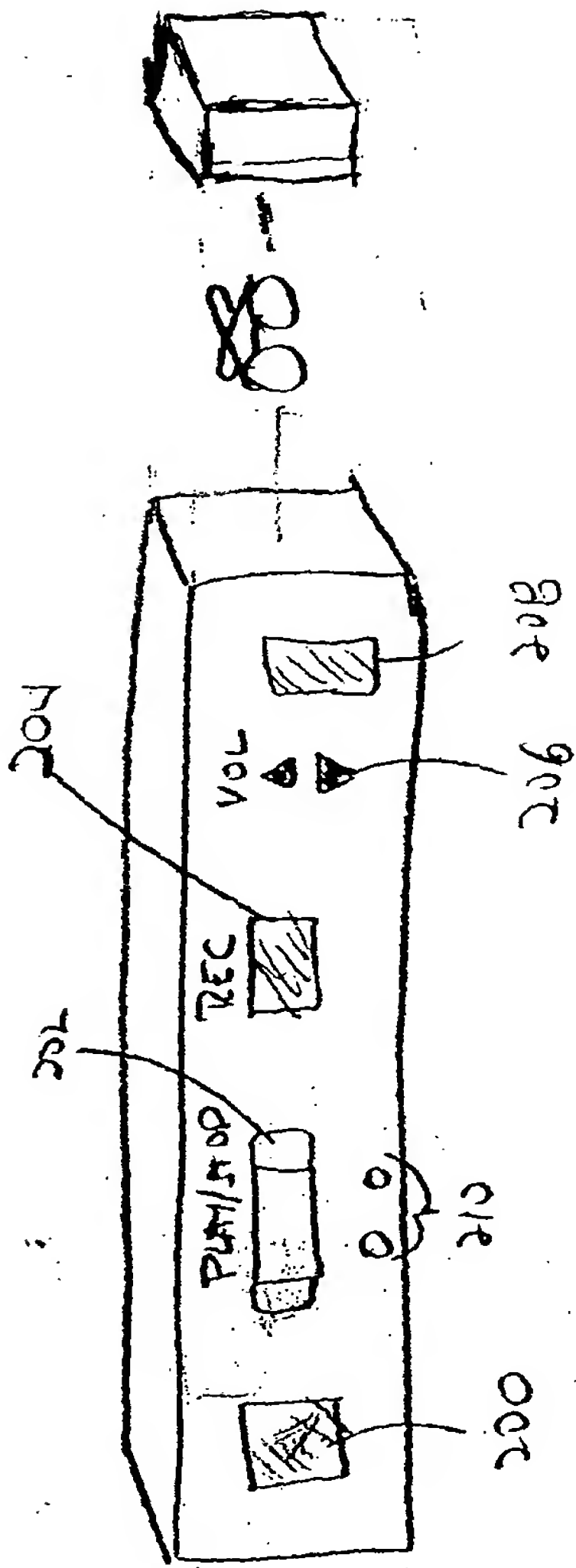


Figure 29

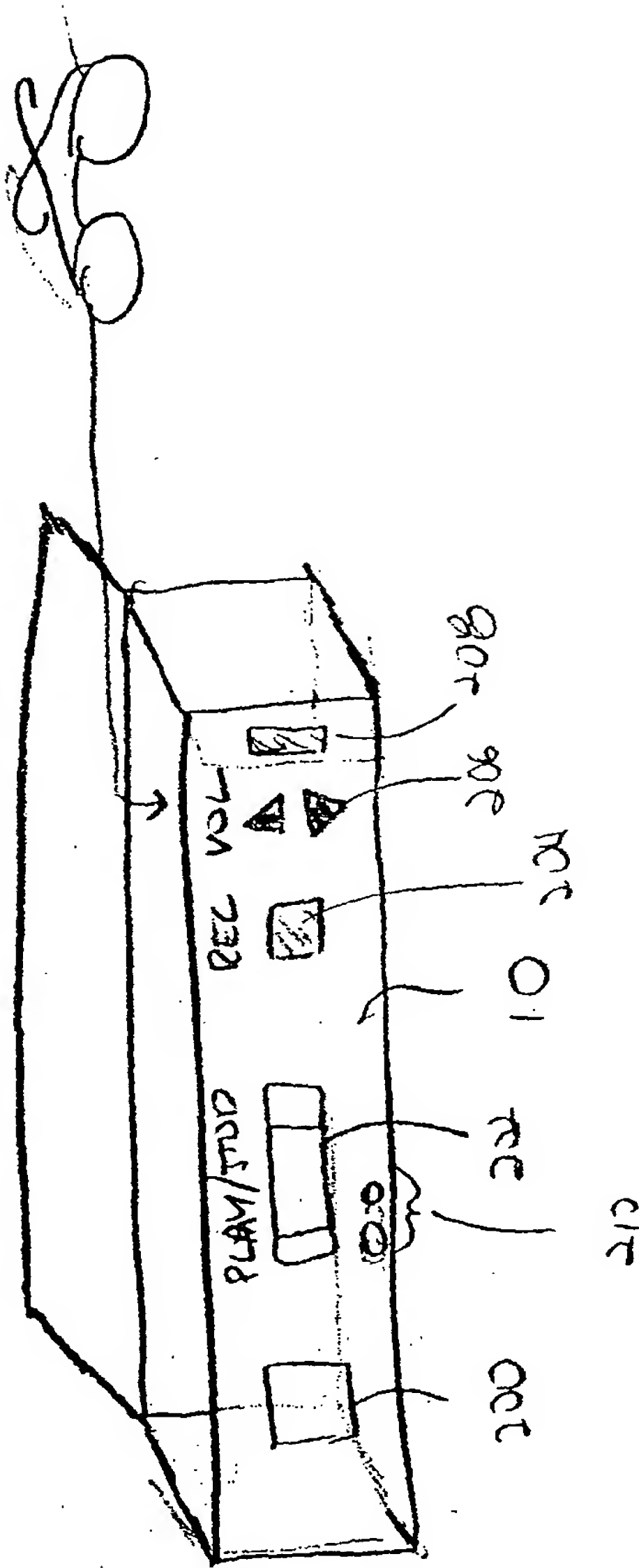


Figure 30



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/00142

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A45C 11/04; A24F 15/00

US CL : 206/5, 6, 242, 236, 86, 85, 216, 223

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 206/5, 6, 242, 236, 86, 85, 216, 223

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
N/A

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
USPAT, US-PGPUB, JPO, EPO, DERWENT

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P ----- Y, P	US 6,463,936 B1 (HICKS) 15 October 2002, Figure 5 embodiment.	1, 4 and 6 ----- 2-3, 5 and 7
X --- Y	US 5,706,975 A (CRONK) 13 January 1998, Figure 1 embodiment and column 4, lines 24-25.	1,4 and 6 ----- 2-3, 5 and 7
Y	US 5,929,967 A (CONNER) 27 July 1999, entire document.	1-7
Y, P	US 6,357,641 B1 (CHENG) 19 March 2002, column 2, lines 40-41.	1-7

☐

Further documents are listed in the continuation of Box C.

☐

See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

02 April 2003 (02.04.2003)

Date of mailing of the international search report

**14 APR 2003**

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks

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**Paralegal Specialist**  
**Tech. Center 3700**

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/00142

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-7

Remark on Protest

☐

The additional search fees were accompanied by the applicant's protest.

☐

No protest accompanied the payment of additional search fees.

**BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In order for more than one species to be examined, the appropriate additional examination fees must be paid. The species are as follows:

Species I, as shown in Figures 20-23.

Species II as shown in Figures 24-26.

Species III as shown in Figures 27-28.

Species IV as shown in Figures 29-30.

The claims are deemed to correspond to the species listed above in the following manner:

Claims 1-7 correspond to species I.

Claims 8-12 correspond to species II.

Claims 13-17 correspond to species III.

Claims 18-22 correspond to species IV.

The following claim(s) are generic: no claims appear to be generic.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The common feature (a container for storing glasses) is shown in U.S. Patent No.5,929,967. Accordingly said common feature is not a special technical feature.

The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.